

September 2016

Amity Fire District/2742
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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



September 2016
Amity Fire District/2742

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

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

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

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

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



September 2016
Amity Fire District/2742

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Amity Fire District -- #2742

September 2016

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Executive Summary

Milliman has prepared this report for Amity Fire District to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for Amity Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	21.03%	14.81%	21.03%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(7.48%)	(7.48%)	(7.48%)	(7.48%)	(7.48%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.12%	12.90%	19.12%	6.11%	10.88%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.62%	13.40%	19.62%	6.54%	11.31%

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

¹ Includes Multnomah Fire District #10 rate.

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Amity Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$153,721	\$164,699
Allocated pre-SLGRP pooled liability/(surplus)	(13,194)	(18,254)
Transition liability/(surplus)	(57,022)	(57,451)
Allocated pooled OPSRP UAL	11,411	11,661
Side account	0	0
Net unfunded pension actuarial accrued liability	94,916	100,655
Combined valuation payroll	80,264	102,000
Net pension UAL as a percentage of payroll	118%	99%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(7.48%)	(5.57%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$390	\$811
Allocated pooled RHIPA UAL	\$0	\$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	63,958	13,668	21.53%	96,256	20,724
Tier 2 Police & Fire	18.95%	10,459	1,982	19.00%	0	0
Total Police & Fire		74,417	15,650		96,256	20,724
Total		\$74,417	\$15,650		\$96,256	\$20,724
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			21.03%			21.53%
Aggregate (Default)			21.03%			21.53%

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$57,451)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.23%)
B. Actual employer payroll	38,303
C. Payment to transition liability/(surplus)	(2,003)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.43%)
B. Actual employer payroll	44,269
C. Payment to transition liability/(surplus)	(2,404)
4. Supplemental payment to transition liability	0
5. Interest	(3,978)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$57,022)

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(57,022)	(57,451)
2. Combined valuation payroll	80,264	102,000
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(7.48%)	(5.57%)

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	80,264	102,000
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

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

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

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

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

September 2016

Arch Cape Water-Sanitary District/2631
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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



September 2016
Arch Cape Water-Sanitary District/2631

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

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

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

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

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



September 2016
Arch Cape Water-Sanitary District/2631

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Arch Cape Water-Sanitary District -- #2631

September 2016

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Executive Summary

Milliman has prepared this report for Arch Cape Water-Sanitary District to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for Arch Cape Water-Sanitary District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(6.23%)	(6.23%)	(6.23%)	(6.23%)	(6.23%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	13.33%	13.33%	21.01%	9.09%	13.86%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.83%	13.83%	21.51%	9.52%	14.29%

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

¹ Includes Multnomah Fire District #10 rate.

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Arch Cape Water-Sanitary District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$223,001	\$176,929
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(68,964)	(70,042)
Allocated pooled OPSRP UAL	16,553	12,527
Side account	0	0
Net unfunded pension actuarial accrued liability	170,590	119,414
Combined valuation payroll	116,438	109,574
Net pension UAL as a percentage of payroll	147%	109%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(6.23%)	(6.32%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$565	\$871
Allocated pooled RHIPA UAL	\$0	\$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	67,935	8,329	12.44%	68,500	8,521
Total General Service		67,935	8,329		68,500	8,521
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$67,935	\$8,329		\$68,500	\$8,521
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$70,042)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.28%)
B. Actual employer payroll	54,156
C. Payment to transition liability/(surplus)	(2,859)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.34%)
B. Actual employer payroll	56,743
C. Payment to transition liability/(surplus)	(3,030)
4. Supplemental payment to transition liability	0
5. Interest	(4,811)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$68,964)

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(68,964)	(70,042)
2. Combined valuation payroll	116,438	109,574
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.23%)	(6.32%)

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	116,438	109,574
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

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

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

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

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

September 2016

Aumsville Rural Fire Protection District/2602
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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



September 2016
Aumsville Rural Fire Protection District/2602

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

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

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

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

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



September 2016
Aumsville Rural Fire Protection District/2602

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Aumsville Rural Fire Protection District -- #2602

September 2016

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Executive Summary

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

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

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

Executive Summary

Employer Contribution Rates

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

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

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

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	21.37%	14.81%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(6.05%)	(6.05%)	(6.05%)	(6.05%)	(6.05%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.62%	16.06%	22.62%	9.27%	14.04%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.12%	16.56%	23.12%	9.70%	14.47%

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

¹ Includes Multnomah Fire District #10 rate.

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Aumsville Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$425,231	\$295,377
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(127,672)	(130,919)
Allocated pooled OPSRP UAL	31,565	20,913
Side account	0	0
Net unfunded pension actuarial accrued liability	329,124	185,371
Combined valuation payroll	222,031	182,930
Net pension UAL as a percentage of payroll	148%	101%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(6.05%)	(7.07%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,078	\$1,454
Allocated pooled RHIPA UAL	\$0	\$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	60,907	13,016	21.53%	60,409	13,006
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		60,907	13,016		60,409	13,006
Total		\$60,907	\$13,016		\$60,409	\$13,006
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			21.37%			21.53%
Aggregate (Default)			21.37%			21.53%

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$130,919)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.80%)
B. Actual employer payroll	110,387
C. Payment to transition liability/(surplus)	(5,299)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.04%)
B. Actual employer payroll	113,510
C. Payment to transition liability/(surplus)	(6,855)
4. Supplemental payment to transition liability	0
5. Interest	(8,907)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$127,672)

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(127,672)	(130,919)
2. Combined valuation payroll	222,031	182,930
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.05%)	(7.07%)

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	222,031	182,930
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

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

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

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

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

September 2016

Aurora Rural Fire Protection District/2804
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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



September 2016
Aurora Rural Fire Protection District/2804

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

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

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

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

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



September 2016
Aurora Rural Fire Protection District/2804

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Aurora Rural Fire Protection District -- #2804

September 2016

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Executive Summary

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

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

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

Executive Summary

Employer Contribution Rates

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

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

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

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(10.41%)	(10.41%)	(10.41%)	(10.41%)	(10.41%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.84%	11.70%	15.84%	4.91%	9.68%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.34%	12.20%	16.34%	5.34%	10.11%

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

¹ Includes Multnomah Fire District #10 rate.

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Aurora Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$582,779	\$492,316
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(301,058)	(309,253)
Allocated pooled OPSRP UAL	43,259	34,856
Side account	0	0
Net unfunded pension actuarial accrued liability	324,980	217,919
Combined valuation payroll	304,293	304,896
Net pension UAL as a percentage of payroll	107%	71%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(10.41%)	(10.02%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,478	\$2,423
Allocated pooled RHIPA UAL	\$0	\$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	82,192	15,575	19.00%	79,872	15,176
Total Police & Fire		82,192	15,575		79,872	15,176
Total		\$82,192	\$15,575		\$79,872	\$15,176
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$309,253)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(10.30%)
B. Actual employer payroll	142,364
C. Payment to transition liability/(surplus)	(14,664)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(9.82%)
B. Actual employer payroll	148,018
C. Payment to transition liability/(surplus)	(14,535)
4. Supplemental payment to transition liability	0
5. Interest	(21,004)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$301,058)

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(301,058)	(309,253)
2. Combined valuation payroll	304,293	304,896
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(10.41%)	(10.02%)

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	304,293	304,896
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

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

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

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

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

September 2016

Baker County Library District/2728
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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



September 2016
Baker County Library District/2728

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

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

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

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

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



September 2016
Baker County Library District/2728

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Baker County Library District -- #2728

September 2016

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Executive Summary

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

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

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

Executive Summary

Employer Contribution Rates

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

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

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

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.11%	15.11%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.79%)	(1.79%)	(1.79%)	(1.79%)	(1.79%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.62%	20.62%	25.45%	13.53%	18.30%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.12%	21.12%	25.95%	13.96%	18.73%

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

¹ Includes Multnomah Fire District #10 rate.

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Baker County Library District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,066,310	\$675,909
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(94,967)	(99,781)
Allocated pooled OPSRP UAL	79,152	47,855
Side account	0	0
Net unfunded pension actuarial accrued liability	1,050,495	623,983
Combined valuation payroll	556,765	418,597
Net pension UAL as a percentage of payroll	189%	149%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.79%)	(2.36%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,703	\$3,327
Allocated pooled RHIPA UAL	\$0	\$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$131,985	\$23,163	17.89%	\$90,054	\$16,111
Tier 2 General Service	12.26%	112,594	13,804	12.44%	110,573	13,755
Total General Service		244,579	36,967		200,627	29,866
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$244,579	\$36,967		\$200,627	\$29,866
Employer normal cost rate						
General Service			15.11%			14.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.11%			14.89%

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$99,781)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.43%)
B. Actual employer payroll	239,501
C. Payment to transition liability/(surplus)	(5,820)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.20%)
B. Actual employer payroll	255,480
C. Payment to transition liability/(surplus)	(5,620)
4. Supplemental payment to transition liability	0
5. Interest	(6,626)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$94,967)

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(94,967)	(99,781)
2. Combined valuation payroll	556,765	418,597
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.79%)	(2.36%)

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	556,765	418,597
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

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

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

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

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

September 2016

Baker County/2021
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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



September 2016
Baker County/2021

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

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

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

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

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



September 2016
Baker County/2021

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Baker County -- #2021

September 2016

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

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Executive Summary

Milliman has prepared this report for Baker County to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for Baker County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.71%	14.03%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.51%)	(4.51%)	(4.51%)	(4.51%)	(4.51%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.50%	16.82%	21.74%	10.81%	15.58%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.00%	17.32%	22.24%	11.24%	16.01%

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

¹ Includes Multnomah Fire District #10 rate.

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Baker County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$10,049,267	\$7,991,181
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(2,251,187)	(2,298,531)
Allocated pooled OPSRP UAL	745,954	565,780
Side account	0	0
Net unfunded pension actuarial accrued liability	8,544,034	6,258,430
Combined valuation payroll	5,247,140	4,949,016
Net pension UAL as a percentage of payroll	163%	126%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.51%)	(4.59%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$25,478	\$39,338
Allocated pooled RHIPA UAL	\$0	\$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$495,837	\$87,019	17.89%	\$514,671	\$92,075
Tier 2 General Service	12.26%	983,829	120,617	12.44%	1,126,992	140,198
Total General Service		1,479,666	207,636		1,641,663	232,273
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	767,934	145,523	19.00%	739,520	140,509
Total Police & Fire		767,934	145,523		739,520	140,509
Total		\$2,247,600	\$353,159		\$2,381,183	\$372,782
Employer normal cost rate						
General Service			14.03%			14.15%
Police & Fire			18.95%			19.00%
Aggregate (Default)			15.71%			15.66%

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$2,298,531)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.04%)
B. Actual employer payroll	2,381,806
C. Payment to transition liability/(surplus)	(96,225)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.30%)
B. Actual employer payroll	2,515,808
C. Payment to transition liability/(surplus)	(108,179)
4. Supplemental payment to transition liability	0
5. Interest	(157,060)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$2,251,187)

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(2,251,187)	(2,298,531)
2. Combined valuation payroll	5,247,140	4,949,016
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.51%)	(4.59%)

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	5,247,140	4,949,016
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

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

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

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

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

September 2016

Baker Valley Irrigation District/2601
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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



September 2016
Baker Valley Irrigation District/2601

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

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

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

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

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



September 2016
Baker Valley Irrigation District/2601

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Baker Valley Irrigation District -- #2601

September 2016

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Executive Summary

Milliman has prepared this report for Baker Valley Irrigation District to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for Baker Valley Irrigation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(31.11%)	(31.11%)	(31.11%)	(31.11%)	(31.11%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	0.00%	0.00%	0.00%	0.00%	0.00%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	0.50%	0.50%	0.50%	0.43%	0.43%

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

¹ Includes Multnomah Fire District #10 rate.

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Baker Valley Irrigation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$136,070	\$112,629
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(210,039)	(205,961)
Allocated pooled OPSRP UAL	10,100	7,974
Side account	0	0
Net unfunded pension actuarial accrued liability	(63,869)	(85,358)
Combined valuation payroll	71,048	69,752
Net pension UAL as a percentage of payroll	(90%)	(122%)
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(31.11%)	(29.18%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$345	\$554
Allocated pooled RHIPA UAL	\$0	\$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$71,048	\$12,469	17.89%	\$69,752	\$12,479
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		71,048	12,469		69,752	12,479
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$71,048	\$12,469		\$69,752	\$12,479
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$205,961)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(12.05%)
B. Actual employer payroll	35,903
C. Payment to transition liability/(surplus)	(4,326)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(19.29%)
B. Actual employer payroll	32,400
C. Payment to transition liability/(surplus)	(6,250)
4. Supplemental payment to transition liability	0
5. Interest	(14,654)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$210,039)

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(210,039)	(205,961)
2. Combined valuation payroll	71,048	69,752
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(31.11%)	(29.18%)

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	71,048	69,752
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

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

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

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

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

September 2016

Benton County/2040
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

September 2016
Benton County/2040

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

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

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

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

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



September 2016
Benton County/2040

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Benton County -- #2040

September 2016

Secondary Employers

2639 North Albany Service District

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Executive Summary

Milliman has prepared this report for Benton County to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for Benton County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.32%	14.14%	19.68%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.16%)	(4.16%)	(4.16%)	(4.16%)	(4.16%)
Side account rate relief ²	(2.59%)	(2.59%)	(2.59%)	(2.59%)	(2.59%)
Net pension contribution rate	15.87%	14.69%	20.23%	8.57%	13.34%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.37%	15.19%	20.73%	9.00%	13.77%

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

¹ Includes Multnomah Fire District #10 rate.

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Benton County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$49,302,793	\$37,140,696
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(10,182,211)	(10,538,222)
Allocated pooled OPSRP UAL	3,659,732	2,629,583
Side account	6,339,129	6,812,834
Net unfunded pension actuarial accrued liability	36,441,185	22,419,223
Combined valuation payroll	25,743,037	23,001,595
Net pension UAL as a percentage of payroll	142%	97%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.16%)	(4.53%)
Side account rate relief	(2.59%)	(2.93%)
Allocated pooled RHIA UAL	\$124,999	\$182,830
Allocated pooled RHIPA UAL	\$0	\$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,986,991	\$524,217	17.89%	\$3,113,970	\$557,089
Tier 2 General Service	12.26%	5,407,080	662,908	12.44%	5,385,586	669,967
Total General Service		8,394,071	1,187,125		8,499,556	1,227,056
Tier 1 Police & Fire	21.37%	683,496	146,063	21.53%	845,989	182,141
Tier 2 Police & Fire	18.95%	1,572,631	298,014	19.00%	1,526,184	289,975
Total Police & Fire		2,256,127	444,077		2,372,173	472,116
Total		\$10,650,198	\$1,631,202		\$10,871,729	\$1,699,172
Employer normal cost rate						
General Service			14.14%			14.44%
Police & Fire			19.68%			19.90%
Aggregate (Default)			15.32%			15.63%

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$10,538,222)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.27%)
B. Actual employer payroll	11,608,384
C. Payment to transition liability/(surplus)	(495,678)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.51%)
B. Actual employer payroll	12,654,559
C. Payment to transition liability/(surplus)	(570,720)
4. Supplemental payment to transition liability	0
5. Interest	(710,387)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$10,182,211)

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(10,182,211)	(10,538,222)
2. Combined valuation payroll	25,743,037	23,001,595
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.16%)	(4.53%)

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$6,812,834	\$6,812,834
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(615,010)	(615,010)
5. Side account earnings during 2015		142,305	142,305
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$6,339,129	\$6,339,129

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$6,339,129	\$6,812,834
Side Account 2	0	0
Side Account 3	0	0
Total	\$6,339,129	\$6,812,834

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	\$6,339,129	\$6,812,834
2. Combined valuation payroll	25,743,037	23,001,595
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(2.59%)	(2.93%)

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

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

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

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

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

September 2016

Black Butte Ranch Police/2749
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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



September 2016
Black Butte Ranch Police/2749

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

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

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

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

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



September 2016
Black Butte Ranch Police/2749

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Black Butte Ranch Police -- #2749

September 2016

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Executive Summary

Milliman has prepared this report for Black Butte Ranch Police to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for Black Butte Ranch Police

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(7.41%)	(7.41%)	(7.41%)	(7.41%)	(7.41%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.11%	12.97%	17.11%	6.18%	10.95%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.61%	13.47%	17.61%	6.61%	11.38%

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

¹ Includes Multnomah Fire District #10 rate.

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Black Butte Ranch Police

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$772,616	\$702,306
Allocated pre-SLGRP pooled liability/(surplus)	(66,315)	(77,837)
Transition liability/(surplus)	(284,270)	(287,814)
Allocated pooled OPSRP UAL	57,351	49,724
Side account	0	0
Net unfunded pension actuarial accrued liability	479,382	386,379
Combined valuation payroll	403,415	434,945
Net pension UAL as a percentage of payroll	119%	89%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(7.41%)	(6.54%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,959	\$3,457
Allocated pooled RHIPA UAL	\$0	\$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	262,065	49,661	19.00%	296,751	56,383
Total Police & Fire		262,065	49,661		296,751	56,383
Total		\$262,065	\$49,661		\$296,751	\$56,383
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$287,814)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.21%)
B. Actual employer payroll	192,015
C. Payment to transition liability/(surplus)	(11,924)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.93%)
B. Actual employer payroll	193,149
C. Payment to transition liability/(surplus)	(11,453)
4. Supplemental payment to transition liability	0
5. Interest	(19,833)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$284,270)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(284,270)	(287,814)
2. Combined valuation payroll	403,415	434,945
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(7.41%)	(6.54%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	403,415	434,945
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Blue Mountain Community College/2901
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Blue Mountain Community College/2901

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Blue Mountain Community College/2901

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Blue Mountain Community College -- #2901

September 2016

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Executive Summary

Milliman has prepared this report for Blue Mountain Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Blue Mountain Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Blue Mountain Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(9.34%)	(9.34%)	(9.34%)	(9.34%)	(9.34%)
Net pension contribution rate	14.25%	14.25%	19.66%	7.74%	12.51%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	14.75%	14.75%	20.16%	8.17%	12.94%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Blue Mountain Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$19,292,376	\$15,373,340
Allocated pre-SLGRP pooled liability/(surplus)	1,685,732	1,717,876
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	1,432,067	1,088,441
Side account	8,940,970	9,544,092
Net unfunded pension actuarial accrued liability	13,469,205	8,635,565
Combined valuation payroll	10,073,351	9,520,859
Net pension UAL as a percentage of payroll	134%	91%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(9.34%)	(9.91%)
Allocated pooled RHIA UAL	\$48,913	\$75,677
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

<i>(\$ in millions)</i>	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 (1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$9,544,092	\$9,544,092
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(801,513)	(801,513)
5. Side account earnings during 2015		199,391	199,391
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$8,940,970	\$8,940,970

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$8,940,970	\$9,544,092
Side Account 2	0	0
Side Account 3	0	0
Total	\$8,940,970	\$9,544,092

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$8,940,970	\$9,544,092
2. Combined valuation payroll	10,073,351	9,520,859
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(9.34%)	(9.91%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Canby Fire District/2595
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Canby Fire District/2595

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Canby Fire District/2595

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Canby Fire District -- #2595

September 2016

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Executive Summary

Milliman has prepared this report for Canby Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Canby Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Canby Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	19.05%	12.26%	19.56%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.85%)	(2.85%)	(2.85%)	(2.85%)	(2.85%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.50%	16.71%	24.01%	12.47%	17.24%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.00%	17.21%	24.51%	12.90%	17.67%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Canby Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,391,858	\$3,184,155
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(480,124)	(491,547)
Allocated pooled OPSRP UAL	251,777	225,440
Side account	0	0
Net unfunded pension actuarial accrued liability	3,163,511	2,918,048
Combined valuation payroll	1,771,030	1,971,978
Net pension UAL as a percentage of payroll	179%	148%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.85%)	(2.46%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$8,600	\$15,674
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	74,385	9,120	12.44%	71,608	8,908
Total General Service		74,385	9,120		71,608	8,908
Tier 1 Police & Fire	21.37%	251,140	53,669	21.53%	450,860	97,070
Tier 2 Police & Fire	18.95%	740,497	140,324	19.00%	857,908	163,003
Total Police & Fire		991,637	193,993		1,308,768	260,073
Total		\$1,066,022	\$203,113		\$1,380,376	\$268,981
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.56%			19.87%
Aggregate (Default)			19.05%			19.49%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$491,547)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.17%)
B. Actual employer payroll	937,071
C. Payment to transition liability/(surplus)	(20,334)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.48%)
B. Actual employer payroll	991,330
C. Payment to transition liability/(surplus)	(24,586)
4. Supplemental payment to transition liability	0
5. Interest	(33,497)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$480,124)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(480,124)	(491,547)
2. Combined valuation payroll	1,771,030	1,971,978
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.85%)	(2.46%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,771,030	1,971,978
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Canby Utility Board/2731
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Canby Utility Board/2731

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Canby Utility Board/2731

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Canby Utility Board -- #2731

September 2016

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Executive Summary

Milliman has prepared this report for Canby Utility Board to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Canby Utility Board.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Canby Utility Board

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.63%	15.63%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.16%	0.16%	0.16%	0.16%	0.16%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.36%	21.36%	25.67%	13.75%	18.52%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.86%	21.86%	26.17%	14.18%	18.95%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Canby Utility Board

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,292,896	\$2,822,496
Allocated pre-SLGRP pooled liability/(surplus)	(282,637)	(312,818)
Transition liability/(surplus)	26,318	27,156
Allocated pooled OPSRP UAL	244,431	199,834
Side account	0	0
Net unfunded pension actuarial accrued liability	3,281,008	2,736,668
Combined valuation payroll	1,719,358	1,747,999
Net pension UAL as a percentage of payroll	191%	157%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.16%	0.15%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$8,349	\$13,894
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$350,625	\$61,535	17.89%	\$341,262	\$61,052
Tier 2 General Service	12.26%	199,651	24,477	12.44%	192,318	23,924
Total General Service		550,276	86,012		533,580	84,976
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$550,276	\$86,012		\$533,580	\$84,976
Employer normal cost rate						
General Service			15.63%			15.93%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.63%			15.93%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$27,156
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.17%
B. Actual employer payroll	833,223
C. Payment to transition liability/(surplus)	1,416
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.15%
B. Actual employer payroll	837,823
C. Payment to transition liability/(surplus)	1,258
4. Supplemental payment to transition liability	0
5. Interest	1,836
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 (1. - 2C. - 3C. - 4. + 5. + 6.)	\$26,318

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	26,318	27,156
2. Combined valuation payroll	1,719,358	1,747,999
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.16%	0.15%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,719,358	1,747,999
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Cannon Beach Rural Fire Protection District/2840
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Cannon Beach Rural Fire Protection District/2840

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Cannon Beach Rural Fire Protection District/2840

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Cannon Beach Rural Fire Protection District -- #2840

September 2016

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Executive Summary

Milliman has prepared this report for Cannon Beach Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Cannon Beach Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Cannon Beach Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.05%)	(0.05%)	(0.05%)	(0.05%)	(0.05%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	24.47%	20.33%	24.47%	13.54%	18.31%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.97%	20.83%	24.97%	13.97%	18.74%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Cannon Beach Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$248,157	\$233,352
Allocated pre-SLGRP pooled liability/(surplus)	(21,300)	(25,862)
Transition liability/(surplus)	(565)	(598)
Allocated pooled OPSRP UAL	18,421	16,521
Side account	0	0
Net unfunded pension actuarial accrued liability	244,713	223,413
Combined valuation payroll	129,573	144,517
Net pension UAL as a percentage of payroll	189%	155%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.05%)	(0.04%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$629	\$1,149
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	67,593	12,809	19.00%	78,657	14,945
Total Police & Fire		67,593	12,809		78,657	14,945
Total		\$67,593	\$12,809		\$78,657	\$14,945
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$598)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.07%)
B. Actual employer payroll	54,689
C. Payment to transition liability/(surplus)	(38)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.05%)
B. Actual employer payroll	68,437
C. Payment to transition liability/(surplus)	(34)
4. Supplemental payment to transition liability	0
5. Interest	(39)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$565)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(565)	(598)
2. Combined valuation payroll	129,573	144,517
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.05%)	(0.04%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	129,573	144,517
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Central Oregon Coast Fire & Rescue District/2820
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Central Oregon Coast Fire & Rescue District/2820

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Central Oregon Coast Fire & Rescue District/2820

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Central Oregon Coast Fire & Rescue District -- #2820

September 2016

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Executive Summary

Milliman has prepared this report for Central Oregon Coast Fire & Rescue District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Central Oregon Coast Fire & Rescue District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Central Oregon Coast Fire & Rescue District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(7.16%)	(7.16%)	(7.16%)	(7.16%)	(7.16%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.92%	14.95%	20.08%	8.16%	12.93%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.42%	15.45%	20.58%	8.59%	13.36%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Central Oregon Coast Fire & Rescue District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$791,871	\$483,054
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(281,276)	(292,852)
Allocated pooled OPSRP UAL	58,780	34,201
Side account	0	0
Net unfunded pension actuarial accrued liability	569,375	224,403
Combined valuation payroll	413,469	299,160
Net pension UAL as a percentage of payroll	138%	75%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(7.16%)	(9.67%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,008	\$2,378
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	10,804	2,053
Total Police & Fire		0	0		10,804	2,053
Total		\$0	\$0		\$10,804	\$2,053
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			19.00%
Aggregate (Default)			15.78%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$292,852)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(8.08%)
B. Actual employer payroll	202,678
C. Payment to transition liability/(surplus)	(16,376)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(8.25%)
B. Actual employer payroll	179,686
C. Payment to transition liability/(surplus)	(14,824)
4. Supplemental payment to transition liability	0
5. Interest	(19,624)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$281,276)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(281,276)	(292,852)
2. Combined valuation payroll	413,469	299,160
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(7.16%)	(9.67%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	413,469	299,160
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Central Oregon Community College/2999
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Central Oregon Community College/2999

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Central Oregon Community College/2999

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Central Oregon Community College -- #2999

September 2016

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Executive Summary

Milliman has prepared this report for Central Oregon Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Central Oregon Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Central Oregon Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(5.00%)	(5.00%)	(5.00%)	(5.00%)	(5.00%)
Net pension contribution rate	18.59%	18.59%	24.00%	12.08%	16.85%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.09%	19.09%	24.50%	12.51%	17.28%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Central Oregon Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$43,977,766	\$37,016,362
Allocated pre-SLGRP pooled liability/(surplus)	3,842,696	4,136,350
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	3,264,456	2,620,780
Side account	10,918,433	11,821,649
Net unfunded pension actuarial accrued liability	40,166,485	31,951,843
Combined valuation payroll	22,962,619	22,924,594
Net pension UAL as a percentage of payroll	175%	139%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(5.00%)	(5.10%)
Allocated pooled RHIA UAL	\$111,499	\$182,218
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$11,821,649	\$11,821,649
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(1,147,750)	(1,147,750)
5. Side account earnings during 2015		245,533	245,533
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$10,918,433	\$10,918,433

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$10,918,433	\$11,821,649
Side Account 2	0	0
Side Account 3	0	0
Total	\$10,918,433	\$11,821,649

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$10,918,433	\$11,821,649
2. Combined valuation payroll	22,962,619	22,924,594
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(5.00%)	(5.10%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Central Oregon Irrigation District/2563
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Central Oregon Irrigation District/2563

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Central Oregon Irrigation District/2563

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Central Oregon Irrigation District -- #2563

September 2016

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Executive Summary

Milliman has prepared this report for Central Oregon Irrigation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Central Oregon Irrigation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Central Oregon Irrigation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.81%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	2.73%	2.73%	2.73%	2.73%	2.73%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.11%	23.11%	28.24%	16.32%	21.09%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.61%	23.61%	28.74%	16.75%	21.52%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Central Oregon Irrigation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,241,203	\$2,621,155
Allocated pre-SLGRP pooled liability/(surplus)	(278,200)	(290,504)
Transition liability/(surplus)	438,336	457,018
Allocated pooled OPSRP UAL	240,594	185,579
Side account	0	0
Net unfunded pension actuarial accrued liability	3,641,933	2,973,248
Combined valuation payroll	1,692,367	1,623,307
Net pension UAL as a percentage of payroll	215%	183%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	2.73%	2.78%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$8,218	\$12,903
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$343,865	\$60,348	17.89%	\$330,170	\$59,067
Tier 2 General Service	12.26%	370,281	45,396	12.44%	424,316	52,785
Total General Service		714,146	105,744		754,486	111,852
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$714,146	\$105,744		\$754,486	\$111,852
Employer normal cost rate						
General Service			14.81%			14.82%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.81%			14.82%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$457,018
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	3.01%
B. Actual employer payroll	818,190
C. Payment to transition liability/(surplus)	24,628
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	2.95%
B. Actual employer payroll	835,134
C. Payment to transition liability/(surplus)	24,636
4. Supplemental payment to transition liability	0
5. Interest	30,582
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$438,336

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	438,336	457,018
2. Combined valuation payroll	1,692,367	1,623,307
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	2.73%	2.78%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,692,367	1,623,307
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Charleston Rural Fire Protection District/2567
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Charleston Rural Fire Protection District/2567

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Charleston Rural Fire Protection District/2567

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Charleston Rural Fire Protection District -- #2567

September 2016

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Executive Summary

Milliman has prepared this report for Charleston Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Charleston Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Charleston Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	20.65%	14.81%	20.65%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.76%)	(5.76%)	(5.76%)	(5.76%)	(5.76%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.19%	16.35%	22.19%	9.56%	14.33%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.69%	16.85%	22.69%	9.99%	14.76%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Charleston Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$356,490	\$290,982
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(101,947)	(104,506)
Allocated pooled OPSRP UAL	26,462	20,602
Side account	0	0
Net unfunded pension actuarial accrued liability	281,005	207,078
Combined valuation payroll	186,138	180,208
Net pension UAL as a percentage of payroll	151%	115%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.76%)	(5.73%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$904	\$1,432
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

<i>(\$ in millions)</i>	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	130,397	27,866	21.53%	129,882	27,964
Tier 2 Police & Fire	18.95%	55,741	10,563	19.00%	50,326	9,562
Total Police & Fire		186,138	38,429		180,208	37,526
Total		\$186,138	\$38,429		\$180,208	\$37,526
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			20.65%			20.82%
Aggregate (Default)			20.65%			20.82%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$104,506)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.17%)
B. Actual employer payroll	88,969
C. Payment to transition liability/(surplus)	(4,600)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.66%)
B. Actual employer payroll	89,609
C. Payment to transition liability/(surplus)	(5,072)
4. Supplemental payment to transition liability	0
5. Interest	(7,113)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$101,947)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(101,947)	(104,506)
2. Combined valuation payroll	186,138	180,208
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.76%)	(5.73%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	186,138	180,208
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Chemeketa Community College/2919
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Chemeketa Community College/2919

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Chemeketa Community College/2919

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Chemeketa Community College -- #2919

September 2016

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Executive Summary

Milliman has prepared this report for Chemeketa Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Chemeketa Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Chemeketa Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(11.21%)	(11.21%)	(11.21%)	(11.21%)	(11.21%)
Net pension contribution rate	12.38%	12.38%	17.79%	5.87%	10.64%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	12.88%	12.88%	18.29%	6.30%	11.07%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Chemeketa Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$87,635,956	\$72,152,196
Allocated pre-SLGRP pooled liability/(surplus)	7,657,467	8,062,563
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	6,505,191	5,108,418
Side account	48,747,947	52,467,847
Net unfunded pension actuarial accrued liability	53,050,667	32,855,330
Combined valuation payroll	45,758,374	44,684,558
Net pension UAL as a percentage of payroll	116%	74%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(11.21%)	(11.60%)
Allocated pooled RHIA UAL	\$222,187	\$355,179
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$52,467,847	\$52,467,847
2. Deposits during 2015		N/A	
3. Administrative expenses		(2,000)	(2,000)
4. Amount transferred to employer reserves during 2015		(4,806,414)	(4,806,414)
5. Side account earnings during 2015		1,088,514	1,088,514
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$48,747,947	\$48,747,947

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$26,559,117	\$28,585,162
Side Account 2	22,188,830	23,882,685
Side Account 3	0	0
Total	\$48,747,947	\$52,467,847

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$48,747,947	\$52,467,847
2. Combined valuation payroll	45,758,374	44,684,558
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(11.21%)	(11.60%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Chetco Library Board/2699
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Chetco Library Board/2699

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Chetco Library Board/2699

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Chetco Library Board -- #2699

September 2016

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Executive Summary

Milliman has prepared this report for Chetco Library Board to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Chetco Library Board.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Chetco Library Board

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.95%	16.95%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.45%)	(0.45%)	(0.45%)	(0.45%)	(0.45%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.07%	22.07%	25.06%	13.14%	17.91%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.57%	22.57%	25.56%	13.57%	18.34%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Chetco Library Board

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$430,609	\$320,171
Allocated pre-SLGRP pooled liability/(surplus)	(36,960)	(35,485)
Transition liability/(surplus)	(9,637)	(9,870)
Allocated pooled OPSRP UAL	31,964	22,668
Side account	0	0
Net unfunded pension actuarial accrued liability	415,976	297,484
Combined valuation payroll	224,839	198,285
Net pension UAL as a percentage of payroll	185%	150%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.45%)	(0.49%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,092	\$1,576
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$129,118	\$22,660	17.89%	\$125,678	\$22,484
Tier 2 General Service	12.26%	16,593	2,034	12.44%	15,729	1,957
Total General Service		145,711	24,694		141,407	24,441
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$145,711	\$24,694		\$141,407	\$24,441
Employer normal cost rate						
General Service			16.95%			17.28%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.95%			17.28%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$9,870)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.39%)
B. Actual employer payroll	104,641
C. Payment to transition liability/(surplus)	(408)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.44%)
B. Actual employer payroll	113,047
C. Payment to transition liability/(surplus)	(497)
4. Supplemental payment to transition liability	0
5. Interest	(672)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$9,637)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(9,637)	(9,870)
2. Combined valuation payroll	224,839	198,285
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.45%)	(0.49%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	224,839	198,285
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Adair Village/2258
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Adair Village/2258

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Adair Village/2258

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Adair Village -- #2258

September 2016

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Executive Summary

Milliman has prepared this report for City of Adair Village to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Adair Village.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Adair Village

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.67%	0.67%	0.67%	0.67%	0.67%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.02%	21.05%	26.18%	14.26%	19.03%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.52%	21.55%	26.68%	14.69%	19.46%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Adair Village

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$321,330	\$423,807
Allocated pre-SLGRP pooled liability/(surplus)	(27,581)	(46,971)
Transition liability/(surplus)	10,727	11,011
Allocated pooled OPSRP UAL	23,852	30,006
Side account	0	0
Net unfunded pension actuarial accrued liability	328,328	417,853
Combined valuation payroll	167,780	262,468
Net pension UAL as a percentage of payroll	196%	159%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.67%	0.41%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$815	\$2,086
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

<i>(\$ in millions)</i>	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$69,199	\$12,380
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		69,199	12,380
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$69,199	\$12,380
Employer normal cost rate						
General Service			14.81%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$11,011
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.47%
B. Actual employer payroll	116,446
C. Payment to transition liability/(surplus)	547
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.56%
B. Actual employer payroll	86,543
C. Payment to transition liability/(surplus)	485
4. Supplemental payment to transition liability	0
5. Interest	748
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 (1. - 2C. - 3C. - 4. + 5. + 6.)	\$10,727

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	10,727	11,011
2. Combined valuation payroll	167,780	262,468
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.67%	0.41%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	167,780	262,468
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Albany/2103
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Albany/2103

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Albany/2103

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Albany -- #2103

September 2016

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Executive Summary

Milliman has prepared this report for City of Albany to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Albany.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Albany

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	17.03%	14.17%	20.13%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.96%)	(2.96%)	(2.96%)	(2.96%)	(2.96%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.37%	18.51%	24.47%	12.36%	17.13%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.87%	19.01%	24.97%	12.79%	17.56%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Albany

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$53,482,325	\$42,601,858
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(7,863,322)	(8,087,883)
Allocated pooled OPSRP UAL	3,969,977	3,016,237
Side account	0	0
Net unfunded pension actuarial accrued liability	49,588,980	37,530,212
Combined valuation payroll	27,925,344	26,383,746
Net pension UAL as a percentage of payroll	178%	142%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.96%)	(3.03%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$135,596	\$209,714
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,976,138	\$522,312	17.89%	\$3,044,423	\$544,647
Tier 2 General Service	12.26%	5,267,782	645,830	12.44%	5,073,431	631,135
Total General Service		8,243,920	1,168,142		8,117,854	1,175,782
Tier 1 Police & Fire	21.37%	3,710,979	793,036	21.53%	3,990,754	859,209
Tier 2 Police & Fire	18.95%	3,900,419	739,129	19.00%	3,666,712	696,675
Total Police & Fire		7,611,398	1,532,165		7,657,466	1,555,884
Total		\$15,855,318	\$2,700,307		\$15,775,320	\$2,731,666
Employer normal cost rate						
General Service			14.17%			14.48%
Police & Fire			20.13%			20.32%
Aggregate (Default)			17.03%			17.32%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$8,087,883)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.80%)
B. Actual employer payroll	13,135,004
C. Payment to transition liability/(surplus)	(367,780)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.96%)
B. Actual employer payroll	13,695,430
C. Payment to transition liability/(surplus)	(405,385)
4. Supplemental payment to transition liability	0
5. Interest	(548,604)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$7,863,322)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(7,863,322)	(8,087,883)
2. Combined valuation payroll	27,925,344	26,383,746
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.96%)	(3.03%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	27,925,344	26,383,746
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Amity/2235
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Amity/2235

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Amity/2235

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Amity -- #2235

September 2016

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Executive Summary

Milliman has prepared this report for City of Amity to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Amity.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Amity

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(11.73%)	(11.73%)	(11.73%)	(11.73%)	(11.73%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	7.83%	7.83%	15.51%	3.59%	8.36%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	8.33%	8.33%	16.01%	4.02%	8.79%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Amity

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$471,949	\$636,806
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(274,695)	(276,123)
Allocated pooled OPSRP UAL	35,033	45,086
Side account	0	0
Net unfunded pension actuarial accrued liability	232,287	405,769
Combined valuation payroll	246,424	394,380
Net pension UAL as a percentage of payroll	94%	103%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(11.73%)	(6.92%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,197	\$3,135
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	122,231	14,986	12.44%	123,091	15,313
Total General Service		122,231	14,986		123,091	15,313
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$122,231	\$14,986		\$123,091	\$15,313
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$276,123)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.38%)
B. Actual employer payroll	189,642
C. Payment to transition liability/(surplus)	(12,099)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.22%)
B. Actual employer payroll	136,565
C. Payment to transition liability/(surplus)	(8,494)
4. Supplemental payment to transition liability	0
5. Interest	(19,165)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$274,695)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(274,695)	(276,123)
2. Combined valuation payroll	246,424	394,380
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(11.73%)	(6.92%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	246,424	394,380
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Ashland/2104
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Ashland/2104

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Ashland/2104

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Ashland -- #2104

September 2016

Secondary Employers

2169	Ashland Community Hospital
2744	Ashland Parks Commission

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Executive Summary

Milliman has prepared this report for City of Ashland to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Ashland.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Ashland

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.54%	14.89%	19.85%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.47%	0.47%	0.47%	0.47%	0.47%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.58%	20.93%	25.89%	14.06%	18.83%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.08%	21.43%	26.39%	14.49%	19.26%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Ashland

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$33,626,098	\$27,663,506
Allocated pre-SLGRP pooled liability/(surplus)	(2,886,205)	(3,065,956)
Transition liability/(surplus)	786,825	816,337
Allocated pooled OPSRP UAL	2,496,055	1,958,592
Side account	0	0
Net unfunded pension actuarial accrued liability	34,022,773	27,372,479
Combined valuation payroll	17,557,583	17,132,279
Net pension UAL as a percentage of payroll	194%	160%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.47%	0.47%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$85,254	\$136,177
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,904,768	\$509,787	17.89%	\$3,197,335	\$572,003
Tier 2 General Service	12.26%	2,932,030	359,467	12.44%	2,902,795	361,108
Total General Service		5,836,798	869,254		6,100,130	933,111
Tier 1 Police & Fire	21.37%	1,077,828	230,332	21.53%	1,302,925	280,520
Tier 2 Police & Fire	18.95%	1,822,478	345,360	19.00%	1,638,066	311,233
Total Police & Fire		2,900,306	575,692		2,940,991	591,753
Total		\$8,737,104	\$1,444,946		\$9,041,121	\$1,524,864
Employer normal cost rate						
General Service			14.89%			15.30%
Police & Fire			19.85%			20.12%
Aggregate (Default)			16.54%			16.87%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$816,337
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.52%
B. Actual employer payroll	8,194,655
C. Payment to transition liability/(surplus)	42,612
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.47%
B. Actual employer payroll	8,892,313
C. Payment to transition liability/(surplus)	41,795
4. Supplemental payment to transition liability	0
5. Interest	54,895
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 (1. - 2C. - 3C. - 4. + 5. + 6.)	\$786,825

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	786,825	816,337
2. Combined valuation payroll	17,557,583	17,132,279
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.47%	0.47%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	17,557,583	17,132,279
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Astoria/2105
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Astoria/2105

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Astoria/2105

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Astoria -- #2105

September 2016

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Executive Summary

Milliman has prepared this report for City of Astoria to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Astoria.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Astoria

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.82%	14.15%	20.03%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	1.77%	1.77%	1.77%	1.77%	1.77%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	24.16%	21.49%	27.37%	15.36%	20.13%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.66%	21.99%	27.87%	15.79%	20.56%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Astoria

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$12,932,823	\$9,210,772
Allocated pre-SLGRP pooled liability/(surplus)	(1,110,054)	(1,020,833)
Transition liability/(surplus)	1,138,371	1,183,785
Allocated pooled OPSRP UAL	960,000	652,128
Side account	0	0
Net unfunded pension actuarial accrued liability	13,921,140	10,025,852
Combined valuation payroll	6,752,764	5,704,321
Net pension UAL as a percentage of payroll	206%	176%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	1.77%	2.05%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$32,789	\$45,341
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$565,067	\$99,169	17.89%	\$592,704	\$106,035
Tier 2 General Service	12.26%	1,016,393	124,610	12.44%	907,954	112,949
Total General Service		1,581,460	223,779		1,500,658	218,984
Tier 1 Police & Fire	21.37%	588,814	125,830	21.53%	514,603	110,794
Tier 2 Police & Fire	18.95%	729,329	138,208	19.00%	649,948	123,490
Total Police & Fire		1,318,143	264,038		1,164,551	234,284
Total		\$2,899,603	\$487,817		\$2,665,209	\$453,268
Employer normal cost rate						
General Service			14.15%			14.59%
Police & Fire			20.03%			20.12%
Aggregate (Default)			16.82%			17.01%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$1,183,785
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	2.26%
B. Actual employer payroll	2,863,003
C. Payment to transition liability/(surplus)	64,704
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	1.99%
B. Actual employer payroll	3,021,624
C. Payment to transition liability/(surplus)	60,131
4. Supplemental payment to transition liability	0
5. Interest	79,421
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$1,138,371

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	1,138,371	1,183,785
2. Combined valuation payroll	6,752,764	5,704,321
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	1.77%	2.05%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	6,752,764	5,704,321
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Aumsville/2234
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Aumsville/2234

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Aumsville/2234

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Aumsville -- #2234

September 2016

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Executive Summary

Milliman has prepared this report for City of Aumsville to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Aumsville.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Aumsville

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.02%	15.52%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(5.07%)	(5.07%)	(5.07%)	(5.07%)	(5.07%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.52%	16.02%	19.45%	8.52%	13.29%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.02%	16.52%	19.95%	8.95%	13.72%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Aumsville

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,661,526	\$1,403,827
Allocated pre-SLGRP pooled liability/(surplus)	(142,613)	(155,587)
Transition liability/(surplus)	(417,890)	(441,425)
Allocated pooled OPSRP UAL	123,335	99,392
Side account	0	0
Net unfunded pension actuarial accrued liability	1,224,358	906,207
Combined valuation payroll	867,552	869,404
Net pension UAL as a percentage of payroll	141%	104%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(5.07%)	(5.02%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,213	\$6,911
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$261,240	\$45,848	17.89%	\$193,879	\$34,685
Tier 2 General Service	12.26%	162,339	19,903	12.44%	155,655	19,363
Total General Service		423,579	65,751		349,534	54,048
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	71,761	13,599	19.00%	134,916	25,634
Total Police & Fire		71,761	13,599		134,916	25,634
Total		\$495,340	\$79,350		\$484,450	\$79,682
Employer normal cost rate						
General Service			15.52%			15.46%
Police & Fire			18.95%			19.00%
Aggregate (Default)			16.02%			16.45%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$441,425)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.18%)
B. Actual employer payroll	398,319
C. Payment to transition liability/(surplus)	(20,633)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.78%)
B. Actual employer payroll	412,052
C. Payment to transition liability/(surplus)	(32,057)
4. Supplemental payment to transition liability	0
5. Interest	(29,155)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$417,890)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(417,890)	(441,425)
2. Combined valuation payroll	867,552	869,404
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.07%)	(5.02%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	867,552	869,404
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Aurora/2272
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Aurora/2272

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Aurora/2272

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Aurora -- #2272

September 2016

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Executive Summary

Milliman has prepared this report for City of Aurora to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Aurora.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Aurora

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(17.21%)	(17.21%)	(17.21%)	(17.21%)	(17.21%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	7.64%	7.64%	10.03%	0.00%	2.88%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	8.14%	8.14%	10.53%	0.43%	3.31%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Aurora

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$317,186	\$288,841
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(270,918)	(273,517)
Allocated pooled OPSRP UAL	23,545	20,450
Side account	0	0
Net unfunded pension actuarial accrued liability	69,813	35,774
Combined valuation payroll	165,616	178,882
Net pension UAL as a percentage of payroll	42%	20%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(17.21%)	(15.11%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$804	\$1,422
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$66,182	\$11,615	17.89%	\$62,843	\$11,243
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		66,182	11,615		62,843	11,243
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$66,182	\$11,615		\$62,843	\$11,243
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$273,517)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(8.13%)
B. Actual employer payroll	91,463
C. Payment to transition liability/(surplus)	(7,436)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(20.49%)
B. Actual employer payroll	89,469
C. Payment to transition liability/(surplus)	(14,064)
4. Supplemental payment to transition liability	0
5. Interest	(18,901)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$270,918)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(270,918)	(273,517)
2. Combined valuation payroll	165,616	178,882
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(17.21%)	(15.11%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	165,616	178,882
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Baker City/2159
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Baker City/2159

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Baker City/2159

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Baker City -- #2159

September 2016

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Executive Summary

Milliman has prepared this report for City of Baker City to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Baker City.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Baker City

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	17.09%	14.08%	19.75%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.39%)	(0.39%)	(0.39%)	(0.39%)	(0.39%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.27%	19.26%	24.93%	13.20%	17.97%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.77%	19.76%	25.43%	13.63%	18.40%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Baker City

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$7,104,595	\$5,583,372
Allocated pre-SLGRP pooled liability/(surplus)	(609,804)	(618,807)
Transition liability/(surplus)	(138,955)	(142,635)
Allocated pooled OPSRP UAL	527,372	395,306
Side account	0	0
Net unfunded pension actuarial accrued liability	6,883,208	5,217,236
Combined valuation payroll	3,709,604	3,457,837
Net pension UAL as a percentage of payroll	186%	151%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.39%)	(0.41%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$18,013	\$27,485
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$348,401	\$61,144	17.89%	\$513,681	\$91,898
Tier 2 General Service	12.26%	662,699	81,247	12.44%	646,468	80,421
Total General Service		1,011,100	142,391		1,160,149	172,319
Tier 1 Police & Fire	21.37%	377,261	80,621	21.53%	370,975	79,871
Tier 2 Police & Fire	18.95%	761,265	144,260	19.00%	620,520	117,899
Total Police & Fire		1,138,526	224,881		991,495	197,770
Total		\$2,149,626	\$367,272		\$2,151,644	\$370,089
Employer normal cost rate						
General Service			14.08%			14.85%
Police & Fire			19.75%			19.95%
Aggregate (Default)			17.09%			17.20%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$142,635)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.37%)
B. Actual employer payroll	1,704,635
C. Payment to transition liability/(surplus)	(6,307)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.39%)
B. Actual employer payroll	1,812,342
C. Payment to transition liability/(surplus)	(7,068)
4. Supplemental payment to transition liability	0
5. Interest	(9,695)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$138,955)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(138,955)	(142,635)
2. Combined valuation payroll	3,709,604	3,457,837
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.39%)	(0.41%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	3,709,604	3,457,837
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Bandon/2150
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Bandon/2150

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Bandon/2150

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Bandon -- #2150

September 2016

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Executive Summary

Milliman has prepared this report for City of Bandon to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Bandon.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Bandon

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.86%	14.38%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.28%)	(0.28%)	(0.28%)	(0.28%)	(0.28%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.15%	19.67%	24.24%	13.31%	18.08%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.65%	20.17%	24.74%	13.74%	18.51%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Bandon

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,854,725	\$3,132,961
Allocated pre-SLGRP pooled liability/(surplus)	(330,860)	(347,227)
Transition liability/(surplus)	(52,660)	(53,522)
Allocated pooled OPSRP UAL	286,135	221,815
Side account	0	0
Net unfunded pension actuarial accrued liability	3,757,340	2,954,027
Combined valuation payroll	2,012,712	1,940,273
Net pension UAL as a percentage of payroll	187%	152%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.28%)	(0.27%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$9,773	\$15,422
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$532,914	\$93,526	17.89%	\$585,430	\$104,733
Tier 2 General Service	12.26%	795,681	97,550	12.44%	796,485	99,083
Total General Service		1,328,595	191,076		1,381,915	203,816
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	156,773	29,708	19.00%	221,355	42,057
Total Police & Fire		156,773	29,708		221,355	42,057
Total		\$1,485,368	\$220,784		\$1,603,270	\$245,873
Employer normal cost rate						
General Service			14.38%			14.75%
Police & Fire			18.95%			19.00%
Aggregate (Default)			14.86%			15.34%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$53,522)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.23%)
B. Actual employer payroll	912,351
C. Payment to transition liability/(surplus)	(2,098)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.24%)
B. Actual employer payroll	1,015,855
C. Payment to transition liability/(surplus)	(2,438)
4. Supplemental payment to transition liability	0
5. Interest	(3,674)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$52,660)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(52,660)	(53,522)
2. Combined valuation payroll	2,012,712	1,940,273
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.28%)	(0.27%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,012,712	1,940,273
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Banks/2231
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Banks/2231

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Banks/2231

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Banks -- #2231

September 2016

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Executive Summary

Milliman has prepared this report for City of Banks to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Banks.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Banks

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(10.49%)	(10.49%)	(10.49%)	(10.49%)	(10.49%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	9.07%	9.07%	16.75%	4.83%	9.60%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	9.57%	9.57%	17.25%	5.26%	10.03%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Banks

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$594,266	\$590,381
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(309,222)	(320,547)
Allocated pooled OPSRP UAL	44,112	41,799
Side account	0	0
Net unfunded pension actuarial accrued liability	329,156	311,633
Combined valuation payroll	310,291	365,629
Net pension UAL as a percentage of payroll	106%	85%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(10.49%)	(8.66%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,507	\$2,906
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	27,644	3,389	12.44%	80,781	10,049
Total General Service		27,644	3,389		80,781	10,049
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$27,644	\$3,389		\$80,781	\$10,049
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$320,547)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(9.29%)
B. Actual employer payroll	174,210
C. Payment to transition liability/(surplus)	(16,184)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(9.26%)
B. Actual employer payroll	180,512
C. Payment to transition liability/(surplus)	(16,715)
4. Supplemental payment to transition liability	0
5. Interest	(21,574)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$309,222)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(309,222)	(320,547)
2. Combined valuation payroll	310,291	365,629
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(10.49%)	(8.66%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	310,291	365,629
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Bay City/2241
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Bay City/2241

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Bay City/2241

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Bay City -- #2241

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Bay City to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Bay City.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Bay City

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(3.81%)	(3.81%)	(3.81%)	(3.81%)	(3.81%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	14.02%	14.02%	21.70%	9.78%	14.55%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	14.52%	14.52%	22.20%	10.21%	14.98%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Bay City

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$634,975	\$504,575
Allocated pre-SLGRP pooled liability/(surplus)	(54,501)	(55,922)
Transition liability/(surplus)	(120,080)	(124,970)
Allocated pooled OPSRP UAL	47,134	35,724
Side account	0	0
Net unfunded pension actuarial accrued liability	507,528	359,407
Combined valuation payroll	331,547	312,488
Net pension UAL as a percentage of payroll	153%	115%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(3.81%)	(3.95%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,610	\$2,484
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	64,586	7,918	12.44%	61,570	7,659
Total General Service		64,586	7,918		61,570	7,659
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$64,586	\$7,918		\$61,570	\$7,659
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$124,970)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.98%)
B. Actual employer payroll	162,109
C. Payment to transition liability/(surplus)	(6,452)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.11%)
B. Actual employer payroll	165,825
C. Payment to transition liability/(surplus)	(6,816)
4. Supplemental payment to transition liability	0
5. Interest	(8,378)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$120,080)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(120,080)	(124,970)
2. Combined valuation payroll	331,547	312,488
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.81%)	(3.95%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	331,547	312,488
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Boardman/2178
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Boardman/2178

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Boardman/2178

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Boardman -- #2178

September 2016

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Executive Summary

Milliman has prepared this report for City of Boardman to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Boardman.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Boardman

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.84%	13.30%	20.12%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.48%)	(0.48%)	(0.48%)	(0.48%)	(0.48%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.93%	18.39%	25.21%	13.11%	17.88%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.43%	18.89%	25.71%	13.54%	18.31%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Boardman

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,472,625	\$1,741,064
Allocated pre-SLGRP pooled liability/(surplus)	(212,231)	(192,963)
Transition liability/(surplus)	(59,188)	(61,179)
Allocated pooled OPSRP UAL	183,542	123,268
Side account	0	0
Net unfunded pension actuarial accrued liability	2,384,748	1,610,190
Combined valuation payroll	1,291,060	1,078,258
Net pension UAL as a percentage of payroll	185%	149%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.48%)	(0.56%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,269	\$8,571
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$80,012	\$14,042	17.89%	\$76,583	\$13,701
Tier 2 General Service	12.26%	325,748	39,937	12.44%	312,139	38,830
Total General Service		405,760	53,979		388,722	52,531
Tier 1 Police & Fire	21.37%	57,133	12,209	21.53%	54,808	11,800
Tier 2 Police & Fire	18.95%	61,201	11,598	19.00%	52,744	10,021
Total Police & Fire		118,334	23,807		107,552	21,821
Total		\$524,094	\$77,786		\$496,274	\$74,352
Employer normal cost rate						
General Service			13.30%			13.51%
Police & Fire			20.12%			20.29%
Aggregate (Default)			14.84%			14.98%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$61,179)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.49%)
B. Actual employer payroll	576,217
C. Payment to transition liability/(surplus)	(2,823)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.51%)
B. Actual employer payroll	646,311
C. Payment to transition liability/(surplus)	(3,297)
4. Supplemental payment to transition liability	0
5. Interest	(4,129)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$59,188)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(59,188)	(61,179)
2. Combined valuation payroll	1,291,060	1,078,258
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.48%)	(0.56%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,291,060	1,078,258
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Brookings/2216
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Brookings/2216

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Brookings/2216

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Brookings -- #2216

September 2016

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Executive Summary

Milliman has prepared this report for City of Brookings to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Brookings.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Brookings

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.52%	13.81%	19.59%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.81%)	(0.81%)	(0.81%)	(0.81%)	(0.81%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.28%	18.57%	24.35%	12.78%	17.55%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.78%	19.07%	24.85%	13.21%	17.98%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Brookings

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$5,741,619	\$4,648,738
Allocated pre-SLGRP pooled liability/(surplus)	(492,816)	(515,221)
Transition liability/(surplus)	(229,839)	(240,115)
Allocated pooled OPSRP UAL	426,199	329,133
Side account	0	0
Net unfunded pension actuarial accrued liability	5,445,163	4,222,535
Combined valuation payroll	2,997,938	2,879,009
Net pension UAL as a percentage of payroll	182%	147%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.81%)	(0.82%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$14,557	\$22,884
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$152,833	\$26,822	17.89%	\$190,679	\$34,112
Tier 2 General Service	12.26%	368,960	45,234	12.44%	405,234	50,411
Total General Service		521,793	72,056		595,913	84,523
Tier 1 Police & Fire	21.37%	120,830	25,821	21.53%	117,833	25,369
Tier 2 Police & Fire	18.95%	339,015	64,243	19.00%	333,047	63,279
Total Police & Fire		459,845	90,064		450,880	88,648
Total		\$981,638	\$162,120		\$1,046,793	\$173,171
Employer normal cost rate						
General Service			13.81%			14.18%
Police & Fire			19.59%			19.66%
Aggregate (Default)			16.52%			16.54%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$240,115)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.96%)
B. Actual employer payroll	1,407,066
C. Payment to transition liability/(surplus)	(13,508)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.89%)
B. Actual employer payroll	1,438,498
C. Payment to transition liability/(surplus)	(12,803)
4. Supplemental payment to transition liability	0
5. Interest	(16,035)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$229,839)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(229,839)	(240,115)
2. Combined valuation payroll	2,997,938	2,879,009
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.81%)	(0.82%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,997,938	2,879,009
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Burns/2204
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Burns/2204

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Burns/2204

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Burns -- #2204

September 2016

Secondary Employers

2108 City of Burns

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Executive Summary

Milliman has prepared this report for City of Burns to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Burns.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Burns

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.33%	16.33%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(6.95%)	(6.95%)	(6.95%)	(6.95%)	(6.95%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.68%	16.68%	20.29%	8.37%	13.14%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.18%	17.18%	20.79%	8.80%	13.57%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Burns

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,210,748	\$963,618
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(417,491)	(427,866)
Allocated pooled OPSRP UAL	89,873	68,225
Side account	0	0
Net unfunded pension actuarial accrued liability	883,130	603,977
Combined valuation payroll	632,182	596,778
Net pension UAL as a percentage of payroll	140%	101%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(6.95%)	(7.09%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,070	\$4,744
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

<i>(\$ in millions)</i>	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$170,855	\$29,985	17.89%	\$160,116	\$28,645
Tier 2 General Service	12.26%	51,239	6,282	12.44%	68,130	8,475
Total General Service		222,094	36,267		228,246	37,120
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$222,094	\$36,267		\$228,246	\$37,120
Employer normal cost rate						
General Service			16.33%			16.26%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.33%			16.26%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$427,866)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.00%)
B. Actual employer payroll	285,362
C. Payment to transition liability/(surplus)	(17,122)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.79%)
B. Actual employer payroll	329,590
C. Payment to transition liability/(surplus)	(22,380)
4. Supplemental payment to transition liability	0
5. Interest	(29,127)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$417,491)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(417,491)	(427,866)
2. Combined valuation payroll	632,182	596,778
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.95%)	(7.09%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	632,182	596,778
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Canby/2109
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Canby/2109

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Canby/2109

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Canby -- #2109

September 2016

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Executive Summary

Milliman has prepared this report for City of Canby to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Canby.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Canby

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	17.07%	14.82%	20.18%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.98%)	(5.98%)	(5.98%)	(5.98%)	(5.98%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.39%	16.14%	21.50%	9.34%	14.11%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.89%	16.64%	22.00%	9.77%	14.54%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Canby

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$11,960,038	\$9,128,321
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(3,549,185)	(3,637,296)
Allocated pooled OPSRP UAL	887,790	646,290
Side account	0	0
Net unfunded pension actuarial accrued liability	9,298,643	6,137,315
Combined valuation payroll	6,244,833	5,653,258
Net pension UAL as a percentage of payroll	149%	109%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.98%)	(6.36%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$30,323	\$44,935
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$863,490	\$151,542	17.89%	\$838,768	\$150,056
Tier 2 General Service	12.26%	917,862	112,530	12.44%	914,174	113,723
Total General Service		1,781,352	264,072		1,752,942	263,779
Tier 1 Police & Fire	21.37%	652,153	139,365	21.53%	661,038	142,321
Tier 2 Police & Fire	18.95%	635,820	120,488	19.00%	615,985	117,037
Total Police & Fire		1,287,973	259,853		1,277,023	259,358
Total		\$3,069,325	\$523,925		\$3,029,965	\$523,137
Employer normal cost rate						
General Service			14.82%			15.05%
Police & Fire			20.18%			20.31%
Aggregate (Default)			17.07%			17.27%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$3,637,296)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.70%)
B. Actual employer payroll	2,811,279
C. Payment to transition liability/(surplus)	(160,243)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.81%)
B. Actual employer payroll	3,020,411
C. Payment to transition liability/(surplus)	(175,486)
4. Supplemental payment to transition liability	0
5. Interest	(247,618)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$3,549,185)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(3,549,185)	(3,637,296)
2. Combined valuation payroll	6,244,833	5,653,258
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.98%)	(6.36%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	6,244,833	5,653,258
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Cannon Beach/2223
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Cannon Beach/2223

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Cannon Beach/2223

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Cannon Beach -- #2223

September 2016

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Executive Summary

Milliman has prepared this report for City of Cannon Beach to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Cannon Beach.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Cannon Beach

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.48%	14.77%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.29%)	(2.29%)	(2.29%)	(2.29%)	(2.29%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.76%	18.05%	22.23%	11.30%	16.07%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.26%	18.55%	22.73%	11.73%	16.50%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Cannon Beach

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,787,322	\$2,758,784
Allocated pre-SLGRP pooled liability/(surplus)	(325,074)	(305,757)
Transition liability/(surplus)	(430,972)	(445,212)
Allocated pooled OPSRP UAL	281,132	195,324
Side account	0	0
Net unfunded pension actuarial accrued liability	3,312,408	2,203,139
Combined valuation payroll	1,977,518	1,708,542
Net pension UAL as a percentage of payroll	168%	129%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.29%)	(2.58%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$9,602	\$13,580
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$339,875	\$59,648	17.89%	\$332,650	\$59,511
Tier 2 General Service	12.26%	375,239	46,004	12.44%	318,781	39,656
Total General Service		715,114	105,652		651,431	99,167
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	145,567	27,585	19.00%	208,630	39,640
Total Police & Fire		145,567	27,585		208,630	39,640
Total		\$860,681	\$133,237		\$860,061	\$138,807
Employer normal cost rate						
General Service			14.77%			15.22%
Police & Fire			18.95%			19.00%
Aggregate (Default)			15.48%			16.14%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$445,212)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.43%)
B. Actual employer payroll	796,952
C. Payment to transition liability/(surplus)	(19,366)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.48%)
B. Actual employer payroll	1,005,737
C. Payment to transition liability/(surplus)	(24,942)
4. Supplemental payment to transition liability	0
5. Interest	(30,068)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$430,972)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(430,972)	(445,212)
2. Combined valuation payroll	1,977,518	1,708,542
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.29%)	(2.58%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,977,518	1,708,542
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Carlton/2198
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Carlton/2198

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Carlton/2198

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Carlton -- #2198

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Carlton to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Carlton.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Carlton

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.03%	12.26%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(11.49%)	(11.49%)	(11.49%)	(11.49%)	(11.49%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	9.84%	8.07%	14.76%	3.83%	8.60%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	10.34%	8.57%	15.26%	4.26%	9.03%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Carlton

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$910,224	\$799,913
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(519,162)	(549,653)
Allocated pooled OPSRP UAL	67,566	56,634
Side account	0	0
Net unfunded pension actuarial accrued liability	458,628	306,894
Combined valuation payroll	475,266	495,394
Net pension UAL as a percentage of payroll	97%	62%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(11.49%)	(10.97%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,308	\$3,938
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	158,668	19,453	12.44%	194,001	24,134
Total General Service		158,668	19,453		194,001	24,134
Tier 1 Police & Fire	21.37%	0	0	21.53%	72,263	15,558
Tier 2 Police & Fire	18.95%	57,057	10,812	19.00%	59,597	11,323
Total Police & Fire		57,057	10,812		131,860	26,881
Total		\$215,725	\$30,265		\$325,861	\$51,015
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			18.95%			20.39%
Aggregate (Default)			14.03%			15.66%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$549,653)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(16.90%)
B. Actual employer payroll	225,579
C. Payment to transition liability/(surplus)	(36,399)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(12.59%)
B. Actual employer payroll	241,931
C. Payment to transition liability/(surplus)	(30,313)
4. Supplemental payment to transition liability	0
5. Interest	(36,221)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$519,162)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(519,162)	(549,653)
2. Combined valuation payroll	475,266	495,394
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(11.49%)	(10.97%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	475,266	495,394
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Cascade Locks/2182
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Cascade Locks/2182

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Cascade Locks/2182

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Cascade Locks -- #2182

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Cascade Locks to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Cascade Locks.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Cascade Locks

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	7.55%	7.55%	7.55%	7.55%	7.55%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	30.67%	30.67%	33.06%	21.14%	25.91%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	31.17%	31.17%	33.56%	21.57%	26.34%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Cascade Locks

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,422,411	\$1,061,018
Allocated pre-SLGRP pooled liability/(surplus)	(122,089)	(117,593)
Transition liability/(surplus)	532,685	552,073
Allocated pooled OPSRP UAL	105,585	75,121
Side account	0	0
Net unfunded pension actuarial accrued liability	1,938,592	1,570,619
Combined valuation payroll	742,700	657,099
Net pension UAL as a percentage of payroll	261%	239%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	7.55%	8.30%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,606	\$5,223
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$217,113	\$38,103	17.89%	\$312,784	\$55,957
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		217,113	38,103		312,784	55,957
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$217,113	\$38,103		\$312,784	\$55,957
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$552,073
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	6.72%
B. Actual employer payroll	318,493
C. Payment to transition liability/(surplus)	21,403
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	9.42%
B. Actual employer payroll	373,130
C. Payment to transition liability/(surplus)	35,149
4. Supplemental payment to transition liability	0
5. Interest	37,164
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 (1. - 2C. - 3C. - 4. + 5. + 6.)	\$532,685

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	532,685	552,073
2. Combined valuation payroll	742,700	657,099
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	7.55%	8.30%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	742,700	657,099
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Cave Junction/2194
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Cave Junction/2194

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Cave Junction/2194

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Cave Junction -- #2194

September 2016

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Executive Summary

Milliman has prepared this report for City of Cave Junction to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Cave Junction.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Cave Junction

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.63%	15.63%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.17%)	(1.17%)	(1.17%)	(1.17%)	(1.17%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.03%	20.03%	24.34%	12.42%	17.19%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.53%	20.53%	24.84%	12.85%	17.62%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Cave Junction

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$895,133	\$776,902
Allocated pre-SLGRP pooled liability/(surplus)	(76,831)	(86,104)
Transition liability/(surplus)	(51,814)	(53,142)
Allocated pooled OPSRP UAL	66,445	55,005
Side account	0	0
Net unfunded pension actuarial accrued liability	832,933	692,661
Combined valuation payroll	467,386	481,143
Net pension UAL as a percentage of payroll	178%	144%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.17%)	(1.09%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,269	\$3,824
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

<i>(\$ in millions)</i>	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$181,187	\$31,798	17.89%	\$202,650	\$36,254
Tier 2 General Service	12.26%	103,529	12,693	12.44%	101,600	12,639
Total General Service		284,716	44,491		304,250	48,893
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$284,716	\$44,491		\$304,250	\$48,893
Employer normal cost rate						
General Service			15.63%			16.07%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.63%			16.07%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$53,142)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.13%)
B. Actual employer payroll	233,045
C. Payment to transition liability/(surplus)	(2,633)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.08%)
B. Actual employer payroll	213,848
C. Payment to transition liability/(surplus)	(2,310)
4. Supplemental payment to transition liability	0
5. Interest	(3,615)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$51,814)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(51,814)	(53,142)
2. Combined valuation payroll	467,386	481,143
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.17%)	(1.09%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	467,386	481,143
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Central Point/2181
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Central Point/2181

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Central Point/2181

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Central Point -- #2181

September 2016

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Executive Summary

Milliman has prepared this report for City of Central Point to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Central Point.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Central Point

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.54%	13.70%	19.88%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.74%)	(2.74%)	(2.74%)	(2.74%)	(2.74%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.10%	18.26%	24.44%	12.58%	17.35%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.60%	18.76%	24.94%	13.01%	17.78%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Central Point

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$8,485,191	\$7,185,889
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(1,153,891)	(1,192,950)
Allocated pooled OPSRP UAL	629,853	508,765
Side account	0	0
Net unfunded pension actuarial accrued liability	7,961,153	6,501,704
Combined valuation payroll	4,430,471	4,450,291
Net pension UAL as a percentage of payroll	180%	146%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.74%)	(2.65%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$21,513	\$35,374
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$487,844	\$85,617	17.89%	\$575,289	\$102,919
Tier 2 General Service	12.26%	1,303,842	159,851	12.44%	1,219,731	151,735
Total General Service		1,791,686	245,468		1,795,020	254,654
Tier 1 Police & Fire	21.37%	291,664	62,329	21.53%	344,433	74,156
Tier 2 Police & Fire	18.95%	465,057	88,128	19.00%	442,310	84,039
Total Police & Fire		756,721	150,457		786,743	158,195
Total		\$2,548,407	\$395,925		\$2,581,763	\$412,849
Employer normal cost rate						
General Service			13.70%			14.19%
Police & Fire			19.88%			20.11%
Aggregate (Default)			15.54%			15.99%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,192,950)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.62%)
B. Actual employer payroll	2,223,205
C. Payment to transition liability/(surplus)	(58,248)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.65%)
B. Actual employer payroll	2,313,773
C. Payment to transition liability/(surplus)	(61,315)
4. Supplemental payment to transition liability	0
5. Interest	(80,504)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,153,891)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,153,891)	(1,192,950)
2. Combined valuation payroll	4,430,471	4,450,291
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.74%)	(2.65%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	4,430,471	4,450,291
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Coburg/2201
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Coburg/2201

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Coburg/2201

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Coburg -- #2201

September 2016

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Executive Summary

Milliman has prepared this report for City of Coburg to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Coburg.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Coburg

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.04%	12.26%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(9.34%)	(9.34%)	(9.34%)	(9.34%)	(9.34%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	12.00%	10.22%	19.33%	5.98%	10.75%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	12.50%	10.72%	19.83%	6.41%	11.18%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Coburg

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,235,224	\$975,019
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(572,378)	(591,137)
Allocated pooled OPSRP UAL	91,690	69,032
Side account	0	0
Net unfunded pension actuarial accrued liability	754,536	452,914
Combined valuation payroll	644,962	603,839
Net pension UAL as a percentage of payroll	117%	75%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(9.34%)	(9.68%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,132	\$4,800
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	336,704	41,280	12.44%	270,388	33,636
Total General Service		336,704	41,280		270,388	33,636
Tier 1 Police & Fire	21.37%	81,691	17,457	21.53%	72,940	15,704
Tier 2 Police & Fire	18.95%	0	0	19.00%	42,130	8,005
Total Police & Fire		81,691	17,457		115,070	23,709
Total		\$418,395	\$58,737		\$385,458	\$57,345
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			21.37%			20.60%
Aggregate (Default)			14.04%			14.88%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$591,137)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(8.70%)
B. Actual employer payroll	270,749
C. Payment to transition liability/(surplus)	(23,555)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(10.19%)
B. Actual employer payroll	344,805
C. Payment to transition liability/(surplus)	(35,137)
4. Supplemental payment to transition liability	0
5. Interest	(39,933)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$572,378)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(572,378)	(591,137)
2. Combined valuation payroll	644,962	603,839
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.34%)	(9.68%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	644,962	603,839
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Columbia City/2271
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Columbia City/2271

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Columbia City/2271

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Columbia City -- #2271

September 2016

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Executive Summary

Milliman has prepared this report for City of Columbia City to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Columbia City.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Columbia City

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.07%)	(0.07%)	(0.07%)	(0.07%)	(0.07%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.05%	23.05%	25.44%	13.52%	18.29%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.55%	23.55%	25.94%	13.95%	18.72%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Columbia City

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$857,997	\$709,225
Allocated pre-SLGRP pooled liability/(surplus)	(73,644)	(78,604)
Transition liability/(surplus)	(2,957)	(3,072)
Allocated pooled OPSRP UAL	63,689	50,214
Side account	0	0
Net unfunded pension actuarial accrued liability	845,085	677,763
Combined valuation payroll	447,996	439,230
Net pension UAL as a percentage of payroll	189%	154%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.07%)	(0.07%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,175	\$3,491
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$143,482	\$25,181	17.89%	\$136,803	\$24,474
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		143,482	25,181		136,803	24,474
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$143,482	\$25,181		\$136,803	\$24,474
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$3,072)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.08%)
B. Actual employer payroll	226,079
C. Payment to transition liability/(surplus)	(181)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.06%)
B. Actual employer payroll	232,687
C. Payment to transition liability/(surplus)	(140)
4. Supplemental payment to transition liability	0
5. Interest	(206)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$2,957)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(2,957)	(3,072)
2. Combined valuation payroll	447,996	439,230
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.07%)	(0.07%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	447,996	439,230
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Condon/2177
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Condon/2177

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Condon/2177

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Condon -- #2177

September 2016

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Executive Summary

Milliman has prepared this report for City of Condon to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Condon.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Condon

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.51%	12.51%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	10.93%	10.93%	10.93%	10.93%	10.93%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	30.74%	30.74%	38.17%	26.25%	31.02%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	31.24%	31.24%	38.67%	26.68%	31.45%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Condon

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$396,925	\$286,805
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	215,287	220,588
Allocated pooled OPSRP UAL	29,464	20,306
Side account	0	0
Net unfunded pension actuarial accrued liability	641,676	527,699
Combined valuation payroll	207,251	177,621
Net pension UAL as a percentage of payroll	310%	297%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	10.93%	12.27%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,006	\$1,412
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$7,631	\$1,339	17.89%	\$7,409	\$1,325
Tier 2 General Service	12.26%	156,505	19,188	12.44%	127,960	15,918
Total General Service		164,136	20,527		135,369	17,243
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$164,136	\$20,527		\$135,369	\$17,243
Employer normal cost rate						
General Service			12.51%			12.74%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.51%			12.74%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$220,588
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	8.17%
B. Actual employer payroll	104,786
C. Payment to transition liability/(surplus)	8,561
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	10.65%
B. Actual employer payroll	110,417
C. Payment to transition liability/(surplus)	11,760
4. Supplemental payment to transition liability	0
5. Interest	15,020
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 (1. - 2C. - 3C. - 4. + 5. + 6.)	\$215,287

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	215,287	220,588
2. Combined valuation payroll	207,251	177,621
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	10.93%	12.27%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	207,251	177,621
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Coquille/2110
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Coquille/2110

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Coquille/2110

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Coquille -- #2110

September 2016

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Executive Summary

Milliman has prepared this report for City of Coquille to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Coquille.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Coquille

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.16%	13.30%	19.73%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	1.12%	1.12%	1.12%	1.12%	1.12%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.85%	19.99%	26.42%	14.71%	19.48%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.35%	20.49%	26.92%	15.14%	19.91%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Coquille

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,146,070	\$2,372,880
Allocated pre-SLGRP pooled liability/(surplus)	(270,034)	(262,987)
Transition liability/(surplus)	174,262	179,487
Allocated pooled OPSRP UAL	233,532	168,001
Side account	0	0
Net unfunded pension actuarial accrued liability	3,283,830	2,457,381
Combined valuation payroll	1,642,694	1,469,548
Net pension UAL as a percentage of payroll	200%	167%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	1.12%	1.21%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$7,976	\$11,681
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$60,703	\$10,653	17.89%	\$104,265	\$18,653
Tier 2 General Service	12.26%	248,101	30,417	12.44%	207,766	25,846
Total General Service		308,804	41,070		312,031	44,499
Tier 1 Police & Fire	21.37%	79,611	17,013	21.53%	77,694	16,728
Tier 2 Police & Fire	18.95%	168,727	31,974	19.00%	198,445	37,705
Total Police & Fire		248,338	48,987		276,139	54,433
Total		\$557,142	\$90,057		\$588,170	\$98,932
Employer normal cost rate						
General Service			13.30%			14.26%
Police & Fire			19.73%			19.71%
Aggregate (Default)			16.16%			16.82%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$179,487
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	1.17%
B. Actual employer payroll	712,763
C. Payment to transition liability/(surplus)	8,339
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	1.15%
B. Actual employer payroll	786,439
C. Payment to transition liability/(surplus)	9,044
4. Supplemental payment to transition liability	0
5. Interest	12,158
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$174,262

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	174,262	179,487
2. Combined valuation payroll	1,642,694	1,469,548
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	1.12%	1.21%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,642,694	1,469,548
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Corvallis/2155
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Corvallis/2155

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Corvallis/2155

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Corvallis -- #2155

September 2016

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Executive Summary

Milliman has prepared this report for City of Corvallis to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Corvallis.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Corvallis

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.93%	15.13%	20.50%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.97%)	(4.97%)	(4.97%)	(4.97%)	(4.97%)
Side account rate relief ²	(2.85%)	(2.85%)	(2.85%)	(2.85%)	(2.85%)
Net pension contribution rate	16.41%	14.61%	19.98%	7.50%	12.27%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.91%	15.11%	20.48%	7.93%	12.70%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Corvallis

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$55,656,580	\$46,624,991
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(13,732,665)	(14,052,243)
Allocated pooled OPSRP UAL	4,131,371	3,301,077
Side account	7,876,452	8,455,425
Net unfunded pension actuarial accrued liability	38,178,834	27,418,400
Combined valuation payroll	29,060,613	28,875,311
Net pension UAL as a percentage of payroll	131%	95%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.97%)	(4.81%)
Side account rate relief	(2.85%)	(2.89%)
Allocated pooled RHIA UAL	\$141,108	\$229,518
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$5,886,196	\$1,033,027	17.89%	\$6,172,158	\$1,104,199
Tier 2 General Service	12.26%	4,953,287	607,273	12.44%	5,385,978	670,016
Total General Service		10,839,483	1,640,300		11,558,136	1,774,215
Tier 1 Police & Fire	21.37%	3,503,564	748,712	21.53%	3,713,836	799,589
Tier 2 Police & Fire	18.95%	1,973,791	374,033	19.00%	2,077,230	394,674
Total Police & Fire		5,477,355	1,122,745		5,791,066	1,194,263
Total		\$16,316,838	\$2,763,045		\$17,349,202	\$2,968,478
Employer normal cost rate						
General Service			15.13%			15.35%
Police & Fire			20.50%			20.62%
Aggregate (Default)			16.93%			17.11%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$14,052,243)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.22%)
B. Actual employer payroll	14,223,181
C. Payment to transition liability/(surplus)	(600,218)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.61%)
B. Actual employer payroll	14,695,279
C. Payment to transition liability/(surplus)	(677,453)
4. Supplemental payment to transition liability	0
5. Interest	(958,093)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$13,732,665)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(13,732,665)	(14,052,243)
2. Combined valuation payroll	29,060,613	28,875,311
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.97%)	(4.81%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$8,455,425	\$8,455,425
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(753,373)	(753,373)
5. Side account earnings during 2015		175,401	175,401
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$7,876,452	\$7,876,452

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$7,876,452	\$8,455,425
Side Account 2	0	0
Side Account 3	0	0
Total	\$7,876,452	\$8,455,425

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$7,876,452	\$8,455,425
2. Combined valuation payroll	29,060,613	28,875,311
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(2.85%)	(2.89%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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September 2016

City of Creswell/2236
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
City of Creswell/2236

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Creswell/2236

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Creswell -- #2236

September 2016

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Executive Summary

Milliman has prepared this report for City of Creswell to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Creswell.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Creswell

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	13.09%	13.09%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.50%)	(2.50%)	(2.50%)	(2.50%)	(2.50%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.89%	17.89%	24.74%	12.82%	17.59%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.39%	18.39%	25.24%	13.25%	18.02%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Creswell

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,383,284	\$1,097,157
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(171,596)	(181,919)
Allocated pooled OPSRP UAL	102,681	77,679
Side account	0	0
Net unfunded pension actuarial accrued liability	1,314,369	992,917
Combined valuation payroll	722,270	679,480
Net pension UAL as a percentage of payroll	182%	146%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.50%)	(2.65%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,507	\$5,401
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$55,660	\$9,768	17.89%	\$52,806	\$9,447
Tier 2 General Service	12.26%	299,502	36,719	12.44%	316,269	39,344
Total General Service		355,162	46,487		369,075	48,791
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$355,162	\$46,487		\$369,075	\$48,791
Employer normal cost rate						
General Service			13.09%			13.22%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.09%			13.22%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$181,919)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.47%)
B. Actual employer payroll	404,480
C. Payment to transition liability/(surplus)	(9,991)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.33%)
B. Actual employer payroll	369,506
C. Payment to transition liability/(surplus)	(12,304)
4. Supplemental payment to transition liability	0
5. Interest	(11,972)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$171,596)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(171,596)	(181,919)
2. Combined valuation payroll	722,270	679,480
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.50%)	(2.65%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	722,270	679,480
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clackamas Community College/2908
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Clackamas Community College/2908

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clackamas Community College/2908

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clackamas Community College -- #2908

September 2016

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Executive Summary

Milliman has prepared this report for Clackamas Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clackamas Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clackamas Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(9.60%)	(9.60%)	(9.60%)	(9.60%)	(9.60%)
Net pension contribution rate	13.99%	13.99%	19.40%	7.48%	12.25%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	14.49%	14.49%	19.90%	7.91%	12.68%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Clackamas Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$52,146,857	\$42,457,523
Allocated pre-SLGRP pooled liability/(surplus)	4,556,496	4,744,367
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	3,870,846	3,006,018
Side account	24,849,805	26,605,926
Net unfunded pension actuarial accrued liability	35,724,394	23,601,982
Combined valuation payroll	27,228,041	26,294,358
Net pension UAL as a percentage of payroll	131%	90%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(9.60%)	(10.00%)
Allocated pooled RHIA UAL	\$132,210	\$209,003
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 (1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$26,605,926	\$26,605,926
2. Deposits during 2015		N/A	
3. Administrative expenses		(2,000)	(2,000)
4. Amount transferred to employer reserves during 2015		(2,316,183)	(2,316,183)
5. Side account earnings during 2015		562,061	562,061
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$24,849,805	\$24,849,805

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$13,130,618	\$14,055,884
Side Account 2	11,719,187	12,550,042
Side Account 3	0	0
Total	\$24,849,805	\$26,605,926

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$24,849,805	\$26,605,926
2. Combined valuation payroll	27,228,041	26,294,358
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(9.60%)	(10.00%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clackamas County Fire District/2745
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Clackamas County Fire District/2745

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clackamas County Fire District/2745

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clackamas County Fire District -- #2745

September 2016

Secondary Employers

2164	Milwaukie Central Dispatch
2517	Clackamas Fire District #1
2523	Oak Lodge Fire Department
2537	Clackamas Fire Protection District #71
2546	Happy Valley Fire District
2548	Multnomah Rural Fire Protection District #12
2574	Clackamas County Rural Fire Protection District #54
2583	Beavercreek Fire District
2591	Clackamas County Rural Fire Protection District #68

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Executive Summary

Milliman has prepared this report for Clackamas County Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clackamas County Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clackamas County Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	19.77%	12.66%	20.32%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(3.74%)	(3.74%)	(3.74%)	(3.74%)	(3.74%)
Net pension contribution rate	23.33%	16.22%	23.88%	11.58%	16.35%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.83%	16.72%	24.38%	12.01%	16.78%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Clackamas County Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$50,514,744	\$39,737,980
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	3,749,694	2,813,472
Side account	9,371,605	10,261,932
Net unfunded pension actuarial accrued liability	44,892,833	32,289,520
Combined valuation payroll	26,375,847	24,610,118
Net pension UAL as a percentage of payroll	170%	131%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	0.00%
Side account rate relief	(3.74%)	(4.12%)
Allocated pooled RHIA UAL	\$128,072	\$195,616
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$73,753	\$12,944	17.89%	\$68,040	\$12,172
Tier 2 General Service	12.26%	906,022	111,078	12.44%	822,631	102,335
Total General Service		979,775	124,022		890,671	114,507
Tier 1 Police & Fire	21.37%	7,186,997	1,535,861	21.53%	8,066,169	1,736,646
Tier 2 Police & Fire	18.95%	5,483,409	1,039,106	19.00%	5,110,811	971,054
Total Police & Fire		12,670,406	2,574,967		13,176,980	2,707,700
Total		\$13,650,181	\$2,698,989		\$14,067,651	\$2,822,207
Employer normal cost rate						
General Service			12.66%			12.86%
Police & Fire			20.32%			20.55%
Aggregate (Default)			19.77%			20.06%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	26,375,847	24,610,118
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$10,261,932	\$10,261,932
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(1,102,180)	(1,102,180)
5. Side account earnings during 2015		212,852	212,852
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$9,371,605	\$9,371,605

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$9,371,605	\$10,261,932
Side Account 2	0	0
Side Account 3	0	0
Total	\$9,371,605	\$10,261,932

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$9,371,605	\$10,261,932
2. Combined valuation payroll	26,375,847	24,610,118
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(3.74%)	(4.12%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clackamas River Water/2761
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Clackamas River Water/2761

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clackamas River Water/2761

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clackamas River Water -- #2761

September 2016

Secondary Employers

2634 Clairmont Water

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Executive Summary

Milliman has prepared this report for Clackamas River Water to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clackamas River Water.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clackamas River Water

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	13.65%	13.65%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	3.15%	3.15%	3.15%	3.15%	3.15%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.37%	22.37%	28.66%	16.74%	21.51%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.87%	22.87%	29.16%	17.17%	21.94%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Clackamas River Water

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$5,027,024	\$4,618,555
Allocated pre-SLGRP pooled liability/(surplus)	(431,481)	(511,876)
Transition liability/(surplus)	786,607	808,040
Allocated pooled OPSRP UAL	373,154	326,996
Side account	0	0
Net unfunded pension actuarial accrued liability	5,755,304	5,241,715
Combined valuation payroll	2,624,818	2,860,316
Net pension UAL as a percentage of payroll	219%	183%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	3.15%	2.79%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$12,745	\$22,735
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$405,184	\$71,110	17.89%	\$585,580	\$104,760
Tier 2 General Service	12.26%	1,133,192	138,929	12.44%	1,235,297	153,671
Total General Service		1,538,376	210,039		1,820,877	258,431
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$1,538,376	\$210,039		\$1,820,877	\$258,431
Employer normal cost rate						
General Service			13.65%			14.19%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.65%			14.19%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$808,040
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	2.65%
B. Actual employer payroll	1,364,174
C. Payment to transition liability/(surplus)	36,151
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	2.78%
B. Actual employer payroll	1,444,667
C. Payment to transition liability/(surplus)	40,162
4. Supplemental payment to transition liability	0
5. Interest	54,880
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$786,607

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	786,607	808,040
2. Combined valuation payroll	2,624,818	2,860,316
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	3.15%	2.79%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,624,818	2,860,316
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clackamas Vector Control/2538
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Clackamas Vector Control/2538

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clackamas Vector Control/2538

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clackamas Vector Control -- #2538

September 2016

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Executive Summary

Milliman has prepared this report for Clackamas Vector Control to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clackamas Vector Control.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clackamas Vector Control

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	5.49%	5.49%	5.49%	5.49%	5.49%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	26.84%	25.87%	31.00%	19.08%	23.85%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	27.34%	26.37%	31.50%	19.51%	24.28%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Clackamas Vector Control

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$355,509	\$538,335
Allocated pre-SLGRP pooled liability/(surplus)	(30,514)	(59,664)
Transition liability/(surplus)	96,858	108,103
Allocated pooled OPSRP UAL	26,389	38,114
Side account	0	0
Net unfunded pension actuarial accrued liability	448,242	624,888
Combined valuation payroll	185,626	333,396
Net pension UAL as a percentage of payroll	241%	187%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	5.49%	3.20%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$901	\$2,650
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$116,086	\$20,768
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		116,086	20,768
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$116,086	\$20,768
Employer normal cost rate						
General Service			14.81%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$108,103
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	6.44%
B. Actual employer payroll	176,097
C. Payment to transition liability/(surplus)	11,341
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	3.78%
B. Actual employer payroll	176,245
C. Payment to transition liability/(surplus)	6,662
4. Supplemental payment to transition liability	0
5. Interest	6,758
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$96,858

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	96,858	108,103
2. Combined valuation payroll	185,626	333,396
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	5.49%	3.20%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	185,626	333,396
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clatskanie Library/2707
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Clatskanie Library/2707

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clatskanie Library/2707

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clatskanie Library -- #2707

September 2016

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Executive Summary

Milliman has prepared this report for Clatskanie Library to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clatskanie Library.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clatskanie Library

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.16%	16.16%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.49%	0.49%	0.49%	0.49%	0.49%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.22%	22.22%	26.00%	14.08%	18.85%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.72%	22.72%	26.50%	14.51%	19.28%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

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	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$155,240	\$114,064
Allocated pre-SLGRP pooled liability/(surplus)	(13,325)	(12,642)
Transition liability/(surplus)	3,809	3,962
Allocated pooled OPSRP UAL	11,523	8,076
Side account	0	0
Net unfunded pension actuarial accrued liability	157,247	113,460
Combined valuation payroll	81,057	70,641
Net pension UAL as a percentage of payroll	194%	161%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.49%	0.55%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$394	\$561
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$52,741	\$9,256	17.89%	\$51,429	\$9,201
Tier 2 General Service	12.26%	18,788	2,303	12.44%	19,212	2,390
Total General Service		71,529	11,559		70,641	11,591
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$71,529	\$11,559		\$70,641	\$11,591
Employer normal cost rate						
General Service			16.16%			16.41%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.16%			16.41%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$3,962
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.57%
B. Actual employer payroll	39,299
C. Payment to transition liability/(surplus)	224
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.50%
B. Actual employer payroll	38,862
C. Payment to transition liability/(surplus)	195
4. Supplemental payment to transition liability	0
5. Interest	266
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$3,809

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	3,809	3,962
2. Combined valuation payroll	81,057	70,641
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.49%	0.55%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	81,057	70,641
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clatskanie PUD/2526
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Clatskanie PUD/2526

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clatskanie PUD/2526

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clatskanie PUD -- #2526

September 2016

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Executive Summary

Milliman has prepared this report for Clatskanie PUD to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clatskanie PUD.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clatskanie PUD

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.51%	14.51%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	5.71%	5.71%	5.71%	5.71%	5.71%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.79%	25.79%	31.22%	19.30%	24.07%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	26.29%	26.29%	31.72%	19.73%	24.50%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Clatskanie PUD

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$6,481,691	\$5,158,440
Allocated pre-SLGRP pooled liability/(surplus)	(556,338)	(571,712)
Transition liability/(surplus)	1,837,087	1,897,776
Allocated pooled OPSRP UAL	481,134	365,221
Side account	0	0
Net unfunded pension actuarial accrued liability	8,243,574	6,849,725
Combined valuation payroll	3,384,360	3,194,672
Net pension UAL as a percentage of payroll	244%	214%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	5.71%	5.87%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$16,433	\$25,393
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

<i>(\$ in millions)</i>	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$376,007	\$65,989	17.89%	\$511,725	\$91,548
Tier 2 General Service	12.26%	506,524	62,100	12.44%	476,827	59,317
Total General Service		882,531	128,089		988,552	150,865
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$882,531	\$128,089		\$988,552	\$150,865
Employer normal cost rate						
General Service			14.51%			15.26%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.51%			15.26%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$1,897,776
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	5.10%
B. Actual employer payroll	1,586,988
C. Payment to transition liability/(surplus)	80,936
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	5.94%
B. Actual employer payroll	1,816,868
C. Payment to transition liability/(surplus)	107,922
4. Supplemental payment to transition liability	0
5. Interest	128,169
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$1,837,087

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	1,837,087	1,897,776
2. Combined valuation payroll	3,384,360	3,194,672
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	5.71%	5.87%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	3,384,360	3,194,672
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clatskanie Rural Fire Protection District/2588
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Clatskanie Rural Fire Protection District/2588

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clatskanie Rural Fire Protection District/2588

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clatskanie Rural Fire Protection District -- #2588

September 2016

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Executive Summary

Milliman has prepared this report for Clatskanie Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clatskanie Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clatskanie Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	20.47%	14.81%	20.47%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.46%)	(5.46%)	(5.46%)	(5.46%)	(5.46%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.31%	16.65%	22.31%	9.86%	14.63%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.81%	17.15%	22.81%	10.29%	15.06%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Clatskanie Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,598,115	\$1,380,792
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(433,087)	(478,145)
Allocated pooled OPSRP UAL	118,628	97,761
Side account	0	0
Net unfunded pension actuarial accrued liability	1,283,656	1,000,408
Combined valuation payroll	834,442	855,138
Net pension UAL as a percentage of payroll	154%	117%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.46%)	(5.53%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,052	\$6,797
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	219,851	46,982	21.53%	205,220	44,184
Tier 2 Police & Fire	18.95%	129,034	24,452	19.00%	115,080	21,865
Total Police & Fire		348,885	71,434		320,300	66,049
Total		\$348,885	\$71,434		\$320,300	\$66,049
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			20.47%			20.62%
Aggregate (Default)			20.47%			20.62%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$478,145)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(9.06%)
B. Actual employer payroll	426,942
C. Payment to transition liability/(surplus)	(38,681)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.99%)
B. Actual employer payroll	457,979
C. Payment to transition liability/(surplus)	(36,592)
4. Supplemental payment to transition liability	0
5. Interest	(30,215)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$433,087)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(433,087)	(478,145)
2. Combined valuation payroll	834,442	855,138
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.46%)	(5.53%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	834,442	855,138
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clatsop Community College/2900
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Clatsop Community College/2900

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clatsop Community College/2900

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clatsop Community College -- #2900

September 2016

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Executive Summary

Milliman has prepared this report for Clatsop Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clatsop Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clatsop Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(11.69%)	(11.69%)	(11.69%)	(11.69%)	(11.69%)
Net pension contribution rate	11.90%	11.90%	17.31%	5.39%	10.16%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	12.40%	12.40%	17.81%	5.82%	10.59%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Clatsop Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$10,611,299	\$8,676,576
Allocated pre-SLGRP pooled liability/(surplus)	927,196	969,554
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	787,674	614,307
Side account	6,153,574	6,567,058
Net unfunded pension actuarial accrued liability	6,172,595	3,693,379
Combined valuation payroll	5,540,600	5,373,488
Net pension UAL as a percentage of payroll	111%	69%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(11.69%)	(12.08%)
Allocated pooled RHIA UAL	\$26,903	\$42,712
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 (1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$6,567,058	\$6,567,058
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(549,119)	(549,119)
5. Side account earnings during 2015		136,635	136,635
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$6,153,574	\$6,153,574

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$6,153,574	\$6,567,058
Side Account 2	0	0
Side Account 3	0	0
Total	\$6,153,574	\$6,567,058

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$6,153,574	\$6,567,058
2. Combined valuation payroll	5,540,600	5,373,488
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(11.69%)	(12.08%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clatsop County/2036
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Clatsop County/2036

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clatsop County/2036

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clatsop County -- #2036

September 2016

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Executive Summary

Milliman has prepared this report for Clatsop County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clatsop County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clatsop County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.64%	15.13%	19.69%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(6.43%)	(6.43%)	(6.43%)	(6.43%)	(6.43%)
Net pension contribution rate	15.78%	14.27%	18.83%	7.16%	11.93%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.28%	14.77%	19.33%	7.59%	12.36%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Clatsop County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$22,666,319	\$19,124,866
Allocated pre-SLGRP pooled liability/(surplus)	(1,945,502)	(2,119,615)
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	1,682,514	1,354,052
Side account	7,237,061	7,725,899
Net unfunded pension actuarial accrued liability	15,166,270	10,633,404
Combined valuation payroll	11,835,027	11,844,216
Net pension UAL as a percentage of payroll	128%	90%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.00%	0.00%
Side account rate relief	(6.43%)	(6.45%)
Allocated pooled RHIA UAL	\$57,467	\$94,145
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,996,360	\$350,361	17.89%	\$2,056,077	\$367,832
Tier 2 General Service	12.26%	1,684,005	206,459	12.44%	1,658,623	206,333
Total General Service		3,680,365	556,820		3,714,700	574,165
Tier 1 Police & Fire	21.37%	555,839	118,783	21.53%	697,396	150,149
Tier 2 Police & Fire	18.95%	1,260,085	238,786	19.00%	1,173,701	223,003
Total Police & Fire		1,815,924	357,569		1,871,097	373,152
Total		\$5,496,289	\$914,389		\$5,585,797	\$947,317
Employer normal cost rate						
General Service			15.13%			15.46%
Police & Fire			19.69%			19.94%
Aggregate (Default)			16.64%			16.96%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	11,835,027	11,844,216
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$7,725,899	\$7,725,899
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(647,723)	(647,723)
5. Side account earnings during 2015		159,885	159,885
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$7,237,061	\$7,237,061

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$7,237,061	\$7,725,899
Side Account 2	0	0
Side Account 3	0	0
Total	\$7,237,061	\$7,725,899

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$7,237,061	\$7,725,899
2. Combined valuation payroll	11,835,027	11,844,216
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(6.43%)	(6.45%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Clean Water Services/2617
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Clean Water Services/2617

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Clean Water Services/2617

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Clean Water Services -- #2617

September 2016

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Executive Summary

Milliman has prepared this report for Clean Water Services to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Clean Water Services.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Clean Water Services

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.41%	15.41%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.26%)	(1.26%)	(1.26%)	(1.26%)	(1.26%)
Side account rate relief ²	(5.16%)	(5.16%)	(5.16%)	(5.16%)	(5.16%)
Net pension contribution rate	16.29%	16.29%	20.82%	8.90%	13.67%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.79%	16.79%	21.32%	9.33%	14.10%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Clean Water Services

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$52,917,528	\$41,400,608
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(3,306,688)	(3,423,705)
Allocated pooled OPSRP UAL	3,928,052	2,931,187
Side account	13,557,837	14,615,963
Net unfunded pension actuarial accrued liability	39,981,055	26,292,127
Combined valuation payroll	27,630,440	25,639,800
Net pension UAL as a percentage of payroll	145%	103%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.26%)	(1.32%)
Side account rate relief	(5.16%)	(5.63%)
Allocated pooled RHIA UAL	\$134,164	\$203,800
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$8,394,876	\$1,473,301	17.89%	\$9,021,094	\$1,613,874
Tier 2 General Service	12.26%	5,720,774	701,367	12.44%	5,346,161	665,062
Total General Service		14,115,650	2,174,668		14,367,255	2,278,936
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$14,115,650	\$2,174,668		\$14,367,255	\$2,278,936
Employer normal cost rate						
General Service			15.41%			15.86%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.41%			15.86%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$3,423,705)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.30%)
B. Actual employer payroll	12,159,012
C. Payment to transition liability/(surplus)	(158,067)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.33%)
B. Actual employer payroll	14,259,373
C. Payment to transition liability/(surplus)	(189,649)
4. Supplemental payment to transition liability	0
5. Interest	(230,699)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$3,306,688)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(3,306,688)	(3,423,705)
2. Combined valuation payroll	27,630,440	25,639,800
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.26%)	(1.32%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$14,615,963	\$14,615,963
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(1,359,183)	(1,359,183)
5. Side account earnings during 2015		302,057	302,057
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$13,557,837	\$13,557,837

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$13,557,837	\$14,615,963
Side Account 2	0	0
Side Account 3	0	0
Total	\$13,557,837	\$14,615,963

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$13,557,837	\$14,615,963
2. Combined valuation payroll	27,630,440	25,639,800
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(5.16%)	(5.63%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Cloverdale Rural Fire Protection District/2681
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Cloverdale Rural Fire Protection District/2681

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Cloverdale Rural Fire Protection District/2681

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Cloverdale Rural Fire Protection District -- #2681

September 2016

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Executive Summary

Milliman has prepared this report for Cloverdale Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Cloverdale Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Cloverdale Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	21.37%	14.81%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	3.30%	3.30%	3.30%	3.30%	3.30%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	30.24%	23.68%	30.24%	16.89%	21.66%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	30.74%	24.18%	30.74%	17.32%	22.09%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Cloverdale Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$256,392	\$194,851
Allocated pre-SLGRP pooled liability/(surplus)	(22,007)	(21,595)
Transition liability/(surplus)	42,015	45,942
Allocated pooled OPSRP UAL	19,032	13,796
Side account	0	0
Net unfunded pension actuarial accrued liability	295,432	232,994
Combined valuation payroll	133,873	120,673
Net pension UAL as a percentage of payroll	221%	193%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	3.30%	3.76%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$650	\$959
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	1,312	163
Total General Service		0	0		1,312	163
Tier 1 Police & Fire	21.37%	83,851	17,919	21.53%	80,767	17,389
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		83,851	17,919		80,767	17,389
Total		\$83,851	\$17,919		\$82,079	\$17,552
Employer normal cost rate						
General Service			14.81%			12.42%
Police & Fire			21.37%			21.53%
Aggregate (Default)			21.37%			21.38%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$45,942
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	6.90%
B. Actual employer payroll	61,693
C. Payment to transition liability/(surplus)	4,257
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	3.93%
B. Actual employer payroll	66,193
C. Payment to transition liability/(surplus)	2,601
4. Supplemental payment to transition liability	0
5. Interest	2,931
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$42,015

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	42,015	45,942
2. Combined valuation payroll	133,873	120,673
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	3.30%	3.76%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	133,873	120,673
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Coburg Rural Fire Protection District/2801
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Coburg Rural Fire Protection District/2801

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Coburg Rural Fire Protection District/2801

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Coburg Rural Fire Protection District -- #2801

September 2016

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Executive Summary

Milliman has prepared this report for Coburg Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Coburg Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Coburg Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	18.94%	17.64%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(6.50%)	(6.50%)	(6.50%)	(6.50%)	(6.50%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.74%	18.44%	19.75%	8.82%	13.59%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.24%	18.94%	20.25%	9.25%	14.02%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Coburg Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$257,206	\$198,301
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(82,902)	(85,841)
Allocated pooled OPSRP UAL	19,092	14,040
Side account	0	0
Net unfunded pension actuarial accrued liability	193,396	126,500
Combined valuation payroll	134,298	122,810
Net pension UAL as a percentage of payroll	144%	103%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(6.50%)	(6.91%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$652	\$976
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$499	\$88	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		499	88		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	83,315	15,788	19.00%	74,038	14,067
Total Police & Fire		83,315	15,788		74,038	14,067
Total		\$83,814	\$15,876		\$74,038	\$14,067
Employer normal cost rate						
General Service			17.64%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.94%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$85,841)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.61%)
B. Actual employer payroll	56,124
C. Payment to transition liability/(surplus)	(3,710)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.01%)
B. Actual employer payroll	71,518
C. Payment to transition liability/(surplus)	(5,013)
4. Supplemental payment to transition liability	0
5. Interest	(5,784)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$82,902)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(82,902)	(85,841)
2. Combined valuation payroll	134,298	122,810
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.50%)	(6.91%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	134,298	122,810
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Colton Fire Department/2649
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Colton Fire Department/2649

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Colton Fire Department/2649

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Colton Fire Department -- #2649

September 2016

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Executive Summary

Milliman has prepared this report for Colton Fire Department to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Colton Fire Department.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Colton Fire Department

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	21.37%	14.81%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.94%)	(5.94%)	(5.94%)	(5.94%)	(5.94%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.73%	16.17%	22.73%	9.38%	14.15%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.23%	16.67%	23.23%	9.81%	14.58%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Colton Fire Department

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$179,273	\$140,075
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(52,885)	(55,430)
Allocated pooled OPSRP UAL	13,307	9,917
Side account	0	0
Net unfunded pension actuarial accrued liability	139,695	94,562
Combined valuation payroll	93,606	86,750
Net pension UAL as a percentage of payroll	149%	109%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.94%)	(6.32%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$455	\$690
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	93,606	20,004	21.53%	86,750	18,677
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		93,606	20,004		86,750	18,677
Total		\$93,606	\$20,004		\$86,750	\$18,677
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			21.37%			21.53%
Aggregate (Default)			21.37%			21.53%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$55,430)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.63%)
B. Actual employer payroll	42,325
C. Payment to transition liability/(surplus)	(3,229)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.34%)
B. Actual employer payroll	47,413
C. Payment to transition liability/(surplus)	(3,006)
4. Supplemental payment to transition liability	0
5. Interest	(3,690)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$52,885)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(52,885)	(55,430)
2. Combined valuation payroll	93,606	86,750
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.94%)	(6.32%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	93,606	86,750
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Columbia 911 Communications District/2671
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Columbia 911 Communications District/2671

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Columbia 911 Communications District/2671

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Columbia 911 Communications District -- #2671

September 2016

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Executive Summary

Milliman has prepared this report for Columbia 911 Communications District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Columbia 911 Communications District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Columbia 911 Communications District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.04%	14.04%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.89%)	(0.89%)	(0.89%)	(0.89%)	(0.89%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.72%	18.72%	24.62%	12.70%	17.47%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.22%	19.22%	25.12%	13.13%	17.90%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Columbia 911 Communications District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,426,265	\$1,994,734
Allocated pre-SLGRP pooled liability/(surplus)	(208,252)	(221,077)
Transition liability/(surplus)	(107,744)	(110,854)
Allocated pooled OPSRP UAL	180,101	141,228
Side account	0	0
Net unfunded pension actuarial accrued liability	2,290,370	1,804,031
Combined valuation payroll	1,266,854	1,235,358
Net pension UAL as a percentage of payroll	181%	146%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.89%)	(0.89%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,151	\$9,819
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$260,697	\$45,752	17.89%	\$248,954	\$44,538
Tier 2 General Service	12.26%	515,856	63,244	12.44%	665,964	82,846
Total General Service		776,553	108,996		914,918	127,384
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$776,553	\$108,996		\$914,918	\$127,384
Employer normal cost rate						
General Service			14.04%			13.92%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.04%			13.92%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$110,854)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.80%)
B. Actual employer payroll	631,448
C. Payment to transition liability/(surplus)	(5,052)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.84%)
B. Actual employer payroll	663,750
C. Payment to transition liability/(surplus)	(5,575)
4. Supplemental payment to transition liability	0
5. Interest	(7,517)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$107,744)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(107,744)	(110,854)
2. Combined valuation payroll	1,266,854	1,235,358
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.89%)	(0.89%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,266,854	1,235,358
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Columbia County/2017
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Columbia County/2017

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Columbia County/2017

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Columbia County -- #2017

September 2016

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Executive Summary

Milliman has prepared this report for Columbia County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Columbia County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Columbia County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.12%	14.96%	19.65%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.72%)	(4.72%)	(4.72%)	(4.72%)	(4.72%)
Side account rate relief ²	(3.84%)	(3.84%)	(3.84%)	(3.84%)	(3.84%)
Net pension contribution rate	14.86%	13.70%	18.39%	6.76%	11.53%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.36%	14.20%	18.89%	7.19%	11.96%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Columbia County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$16,171,276	\$13,053,911
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(3,790,607)	(3,865,246)
Allocated pooled OPSRP UAL	1,200,389	924,225
Side account	3,082,486	3,282,291
Net unfunded pension actuarial accrued liability	10,498,572	6,830,599
Combined valuation payroll	8,443,695	8,084,414
Net pension UAL as a percentage of payroll	124%	84%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.72%)	(4.73%)
Side account rate relief	(3.84%)	(4.01%)
Allocated pooled RHIA UAL	\$41,000	\$64,260
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,542,158	\$270,649	17.89%	\$1,820,928	\$325,764
Tier 2 General Service	12.26%	1,479,614	181,401	12.44%	1,476,934	183,731
Total General Service		3,021,772	452,050		3,297,862	509,495
Tier 1 Police & Fire	21.37%	285,728	61,060	21.53%	261,014	56,196
Tier 2 Police & Fire	18.95%	707,685	134,106	19.00%	830,922	157,875
Total Police & Fire		993,413	195,166		1,091,936	214,071
Total		\$4,015,185	\$647,216		\$4,389,798	\$723,566
Employer normal cost rate						
General Service			14.96%			15.45%
Police & Fire			19.65%			19.60%
Aggregate (Default)			16.12%			16.48%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$3,865,246)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.64%)
B. Actual employer payroll	4,038,371
C. Payment to transition liability/(surplus)	(146,997)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.46%)
B. Actual employer payroll	4,307,261
C. Payment to transition liability/(surplus)	(192,103)
4. Supplemental payment to transition liability	0
5. Interest	(264,461)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$3,790,607)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(3,790,607)	(3,865,246)
2. Combined valuation payroll	8,443,695	8,084,414
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.72%)	(4.73%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$3,282,291	\$3,282,291
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(266,986)	(266,986)
5. Side account earnings during 2015		68,181	68,181
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$3,082,486	\$3,082,486

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$3,082,486	\$3,282,291
Side Account 2	0	0
Side Account 3	0	0
Total	\$3,082,486	\$3,282,291

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$3,082,486	\$3,282,291
2. Combined valuation payroll	8,443,695	8,084,414
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(3.84%)	(4.01%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Columbia Drainage Vector Control District/2687
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Columbia Drainage Vector Control District/2687

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Columbia Drainage Vector Control District/2687

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Columbia Drainage Vector Control District -- #2687

September 2016

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Executive Summary

Milliman has prepared this report for Columbia Drainage Vector Control District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Columbia Drainage Vector Control District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Columbia Drainage Vector Control District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	13.45%	13.45%	13.45%	13.45%	13.45%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	31.28%	31.28%	38.96%	27.04%	31.81%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	31.78%	31.78%	39.46%	27.47%	32.24%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Columbia Drainage Vector Control District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$259,880	\$101,221
Allocated pre-SLGRP pooled liability/(surplus)	(22,306)	(11,218)
Transition liability/(surplus)	173,430	172,118
Allocated pooled OPSRP UAL	19,291	7,166
Side account	0	0
Net unfunded pension actuarial accrued liability	430,295	269,287
Combined valuation payroll	135,694	62,687
Net pension UAL as a percentage of payroll	317%	430%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	13.45%	27.14%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$659	\$498
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	70,970	8,701	12.44%	62,687	7,798
Total General Service		70,970	8,701		62,687	7,798
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$70,970	\$8,701		\$62,687	\$7,798
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$172,118
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	13.37%
B. Actual employer payroll	34,084
C. Payment to transition liability/(surplus)	4,557
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	9.94%
B. Actual employer payroll	62,684
C. Payment to transition liability/(surplus)	6,231
4. Supplemental payment to transition liability	0
5. Interest	12,100
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$173,430

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	173,430	172,118
2. Combined valuation payroll	135,694	62,687
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	13.45%	27.14%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	135,694	62,687
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Columbia Gorge Community College/2996
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Columbia Gorge Community College/2996

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Columbia Gorge Community College/2996

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Columbia Gorge Community College -- #2996

September 2016

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Executive Summary

Milliman has prepared this report for Columbia Gorge Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Columbia Gorge Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Columbia Gorge Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(7.37%)	(7.37%)	(7.37%)	(7.37%)	(7.37%)
Net pension contribution rate	16.22%	16.22%	21.63%	9.71%	14.48%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.72%	16.72%	22.13%	10.14%	14.91%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Columbia Gorge Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$8,861,289	\$8,609,605
Allocated pre-SLGRP pooled liability/(surplus)	774,283	962,070
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	657,771	609,565
Side account	3,242,578	3,456,032
Net unfunded pension actuarial accrued liability	7,050,765	6,725,208
Combined valuation payroll	4,626,847	5,332,012
Net pension UAL as a percentage of payroll	152%	126%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(7.37%)	(6.41%)
Allocated pooled RHIA UAL	\$22,466	\$42,382
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$3,456,032	\$3,456,032
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(284,398)	(284,398)
5. Side account earnings during 2015		71,945	71,945
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$3,242,578	\$3,242,578

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$3,242,578	\$3,456,032
Side Account 2	0	0
Side Account 3	0	0
Total	\$3,242,578	\$3,456,032

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$3,242,578	\$3,456,032
2. Combined valuation payroll	4,626,847	5,332,012
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(7.37%)	(6.41%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Columbia River Fire & Rescue/2528
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Columbia River Fire & Rescue/2528

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Columbia River Fire & Rescue/2528

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Columbia River Fire & Rescue -- #2528

September 2016

Secondary Employers

2577 Rainier Fire Department

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Executive Summary

Milliman has prepared this report for Columbia River Fire & Rescue to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Columbia River Fire & Rescue.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Columbia River Fire & Rescue

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	19.66%	12.26%	19.91%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(6.67%)	(6.67%)	(6.67%)	(6.67%)	(6.67%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.56%	11.16%	18.81%	6.92%	11.69%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.06%	11.66%	19.31%	7.35%	12.12%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Columbia River Fire & Rescue

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$7,716,473	\$6,353,790
Allocated pre-SLGRP pooled liability/(surplus)	(662,322)	(704,193)
Transition liability/(surplus)	(2,555,094)	(2,638,587)
Allocated pooled OPSRP UAL	572,791	449,852
Side account	0	0
Net unfunded pension actuarial accrued liability	5,071,848	3,460,862
Combined valuation payroll	4,029,091	3,934,964
Net pension UAL as a percentage of payroll	126%	88%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(6.67%)	(6.63%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$19,564	\$31,277
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	76,061	9,325	12.44%	74,549	9,274
Total General Service		76,061	9,325		74,549	9,274
Tier 1 Police & Fire	21.37%	895,003	191,262	21.53%	925,631	199,288
Tier 2 Police & Fire	18.95%	1,362,552	258,204	19.00%	1,168,528	222,020
Total Police & Fire		2,257,555	449,466		2,094,159	421,308
Total		\$2,333,616	\$458,791		\$2,168,708	\$430,582
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.91%			20.12%
Aggregate (Default)			19.66%			19.85%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$2,638,587)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.08%)
B. Actual employer payroll	2,018,506
C. Payment to transition liability/(surplus)	(122,725)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.42%)
B. Actual employer payroll	2,165,582
C. Payment to transition liability/(surplus)	(139,030)
4. Supplemental payment to transition liability	0
5. Interest	(178,262)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$2,555,094)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(2,555,094)	(2,638,587)
2. Combined valuation payroll	4,029,091	3,934,964
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.67%)	(6.63%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	4,029,091	3,934,964
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Community Services Consortium/2612
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Community Services Consortium/2612

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Community Services Consortium/2612

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Community Services Consortium -- #2612

September 2016

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Executive Summary

Milliman has prepared this report for Community Services Consortium to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Community Services Consortium.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Community Services Consortium

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.05%	14.05%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.76%)	(1.76%)	(1.76%)	(1.76%)	(1.76%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.86%	17.86%	23.75%	11.83%	16.60%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.36%	18.36%	24.25%	12.26%	17.03%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Community Services Consortium

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$7,074,199	\$6,396,794
Allocated pre-SLGRP pooled liability/(surplus)	(607,195)	(708,959)
Transition liability/(surplus)	(617,278)	(623,360)
Allocated pooled OPSRP UAL	525,116	452,897
Side account	0	0
Net unfunded pension actuarial accrued liability	6,374,842	5,517,372
Combined valuation payroll	3,693,733	3,961,597
Net pension UAL as a percentage of payroll	173%	139%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.76%)	(1.56%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$17,936	\$31,489
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$455,356	\$79,915	17.89%	\$461,055	\$82,483
Tier 2 General Service	12.26%	891,865	109,343	12.44%	1,000,294	124,437
Total General Service		1,347,221	189,258		1,461,349	206,920
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$1,347,221	\$189,258		\$1,461,349	\$206,920
Employer normal cost rate						
General Service			14.05%			14.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.05%			14.16%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$623,360)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.15%)
B. Actual employer payroll	2,012,722
C. Payment to transition liability/(surplus)	(23,146)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.45%)
B. Actual employer payroll	1,793,277
C. Payment to transition liability/(surplus)	(26,002)
4. Supplemental payment to transition liability	0
5. Interest	(43,066)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$617,278)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(617,278)	(623,360)
2. Combined valuation payroll	3,693,733	3,961,597
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.76%)	(1.56%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	3,693,733	3,961,597
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Coos County Airport District/2860
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Coos County Airport District/2860

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Coos County Airport District/2860

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Coos County Airport District -- #2860

September 2016

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Executive Summary

Milliman has prepared this report for Coos County Airport District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Coos County Airport District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Coos County Airport District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.51%)	(5.51%)	(5.51%)	(5.51%)	(5.51%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	14.05%	14.05%	21.73%	9.81%	14.58%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	14.55%	14.55%	22.23%	10.24%	15.01%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Coos County Airport District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,350,896	\$1,083,361
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(369,355)	(385,635)
Allocated pooled OPSRP UAL	100,277	76,703
Side account	0	0
Net unfunded pension actuarial accrued liability	1,081,818	774,429
Combined valuation payroll	705,359	670,936
Net pension UAL as a percentage of payroll	153%	115%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.51%)	(5.68%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,425	\$5,333
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	139,381	17,088	12.44%	131,441	16,351
Total General Service		139,381	17,088		131,441	16,351
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$139,381	\$17,088		\$131,441	\$16,351
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$385,635)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.68%)
B. Actual employer payroll	336,069
C. Payment to transition liability/(surplus)	(22,449)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.83%)
B. Actual employer payroll	336,190
C. Payment to transition liability/(surplus)	(19,600)
4. Supplemental payment to transition liability	0
5. Interest	(25,769)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$369,355)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(369,355)	(385,635)
2. Combined valuation payroll	705,359	670,936
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.51%)	(5.68%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	705,359	670,936
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Coos County/2018
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Coos County/2018

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Coos County/2018

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Coos County -- #2018

September 2016

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Executive Summary

Milliman has prepared this report for Coos County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Coos County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Coos County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.51%	15.07%	20.00%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.92%	0.92%	0.92%	0.92%	0.92%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	24.73%	23.29%	28.22%	16.24%	21.01%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.23%	23.79%	28.72%	16.67%	21.44%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Coos County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$28,148,898	\$21,934,849
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	1,278,304	1,327,596
Allocated pooled OPSRP UAL	2,089,484	1,553,000
Side account	0	0
Net unfunded pension actuarial accrued liability	31,516,686	24,815,445
Combined valuation payroll	14,697,709	13,584,466
Net pension UAL as a percentage of payroll	214%	183%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.92%	0.97%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$71,367	\$107,977
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,737,912	\$480,504	17.89%	\$2,873,224	\$514,020
Tier 2 General Service	12.26%	2,425,055	297,312	12.44%	2,417,949	300,793
Total General Service		5,162,967	777,816		5,291,173	814,813
Tier 1 Police & Fire	21.37%	929,409	198,615	21.53%	1,089,807	234,635
Tier 2 Police & Fire	18.95%	1,203,348	228,034	19.00%	1,301,175	247,223
Total Police & Fire		2,132,757	426,649		2,390,982	481,858
Total		\$7,295,724	\$1,204,465		\$7,682,155	\$1,296,671
Employer normal cost rate						
General Service			15.07%			15.40%
Police & Fire			20.00%			20.15%
Aggregate (Default)			16.51%			16.88%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$1,327,596
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.92%
B. Actual employer payroll	7,057,283
C. Payment to transition liability/(surplus)	64,927
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	1.01%
B. Actual employer payroll	7,282,124
C. Payment to transition liability/(surplus)	73,549
4. Supplemental payment to transition liability	0
5. Interest	89,184
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$1,278,304

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	1,278,304	1,327,596
2. Combined valuation payroll	14,697,709	13,584,466
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.92%	0.97%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	14,697,709	13,584,466
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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September 2016

Corbett Water District/2603
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Corbett Water District/2603

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Corbett Water District/2603

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Corbett Water District -- #2603

September 2016

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Executive Summary

Milliman has prepared this report for Corbett Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Corbett Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Corbett Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.35%	20.38%	25.51%	13.59%	18.36%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.85%	20.88%	26.01%	14.02%	18.79%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Corbett Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$414,160	\$337,813
Allocated pre-SLGRP pooled liability/(surplus)	(35,548)	(37,440)
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	30,743	23,917
Side account	0	0
Net unfunded pension actuarial accrued liability	409,355	324,290
Combined valuation payroll	216,250	209,211
Net pension UAL as a percentage of payroll	189%	155%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.00%	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,050	\$1,663
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	12,801	1,592
Total General Service		0	0		12,801	1,592
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$12,801	\$1,592
Employer normal cost rate						
General Service			14.81%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 (1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	216,250	209,211
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	216,250	209,211
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Council of Governments/2545
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Council of Governments/2545

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Council of Governments/2545

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Council of Governments -- #2545

September 2016

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Executive Summary

Milliman has prepared this report for Council of Governments to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Council of Governments.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Council of Governments

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.52%	14.52%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.01%)	(0.01%)	(0.01%)	(0.01%)	(0.01%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.08%	20.08%	25.50%	13.58%	18.35%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.58%	20.58%	26.00%	14.01%	18.78%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Council of Governments

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$13,844,273	\$10,890,395
Allocated pre-SLGRP pooled liability/(surplus)	(1,188,286)	(1,206,986)
Transition liability/(surplus)	(7,686)	(7,850)
Allocated pooled OPSRP UAL	1,027,656	771,046
Side account	0	0
Net unfunded pension actuarial accrued liability	13,675,957	10,446,605
Combined valuation payroll	7,228,670	6,744,528
Net pension UAL as a percentage of payroll	189%	155%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.01%)	(0.01%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$35,100	\$53,609
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$820,385	\$143,978	17.89%	\$917,898	\$164,212
Tier 2 General Service	12.26%	1,100,534	134,925	12.44%	1,341,409	166,871
Total General Service		1,920,919	278,903		2,259,307	331,083
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$1,920,919	\$278,903		\$2,259,307	\$331,083
Employer normal cost rate						
General Service			14.52%			14.65%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.52%			14.65%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$7,850)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.01%)
B. Actual employer payroll	3,426,170
C. Payment to transition liability/(surplus)	(343)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.01%)
B. Actual employer payroll	3,572,746
C. Payment to transition liability/(surplus)	(357)
4. Supplemental payment to transition liability	0
5. Interest	(536)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$7,686)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(7,686)	(7,850)
2. Combined valuation payroll	7,228,670	6,744,528
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.01%)	(0.01%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	7,228,670	6,744,528
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Crescent Rural Fire Protection District/2834
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Crescent Rural Fire Protection District/2834

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Crescent Rural Fire Protection District/2834

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Crescent Rural Fire Protection District -- #2834

September 2016

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Executive Summary

Milliman has prepared this report for Crescent Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Crescent Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Crescent Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.71%)	(2.71%)	(2.71%)	(2.71%)	(2.71%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.37%	19.40%	24.53%	12.61%	17.38%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.87%	19.90%	25.03%	13.04%	17.81%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Crescent Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$236,177	\$112,850
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(31,806)	(30,590)
Allocated pooled OPSRP UAL	17,531	7,990
Side account	0	0
Net unfunded pension actuarial accrued liability	221,902	90,250
Combined valuation payroll	123,318	69,889
Net pension UAL as a percentage of payroll	180%	129%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.71%)	(4.33%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$599	\$556
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$30,590)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.91%)
B. Actual employer payroll	25,120
C. Payment to transition liability/(surplus)	(480)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.29%)
B. Actual employer payroll	40,585
C. Payment to transition liability/(surplus)	(523)
4. Supplemental payment to transition liability	0
5. Interest	(2,219)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$31,806)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(31,806)	(30,590)
2. Combined valuation payroll	123,318	69,889
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.71%)	(4.33%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	123,318	69,889
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Crook County Rural Fire Protection District #1/2844
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Crook County Rural Fire Protection District #1/2844

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Crook County Rural Fire Protection District #1/2844

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Crook County Rural Fire Protection District #1 -- #2844

September 2016

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Executive Summary

Milliman has prepared this report for Crook County Rural Fire Protection District #1 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Crook County Rural Fire Protection District #1.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Crook County Rural Fire Protection District #1

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	17.76%	12.26%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.23%)	(0.23%)	(0.23%)	(0.23%)	(0.23%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.10%	17.60%	24.29%	13.36%	18.13%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.60%	18.10%	24.79%	13.79%	18.56%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Crook County Rural Fire Protection District #1

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,282,640	\$2,466,583
Allocated pre-SLGRP pooled liability/(surplus)	(281,757)	(273,372)
Transition liability/(surplus)	(37,341)	(42,341)
Allocated pooled OPSRP UAL	243,669	174,636
Side account	0	0
Net unfunded pension actuarial accrued liability	3,207,211	2,325,506
Combined valuation payroll	1,714,003	1,527,579
Net pension UAL as a percentage of payroll	187%	152%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.23%)	(0.27%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$8,323	\$12,142
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	75,157	9,214	12.44%	72,873	9,065
Total General Service		75,157	9,214		72,873	9,065
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	346,409	65,645	19.00%	312,881	59,447
Total Police & Fire		346,409	65,645		312,881	59,447
Total		\$421,566	\$74,859		\$385,754	\$68,512
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			18.95%			19.00%
Aggregate (Default)			17.76%			17.76%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$42,341)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.62%)
B. Actual employer payroll	766,063
C. Payment to transition liability/(surplus)	(4,750)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.35%)
B. Actual employer payroll	815,877
C. Payment to transition liability/(surplus)	(2,855)
4. Supplemental payment to transition liability	0
5. Interest	(2,605)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$37,341)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(37,341)	(42,341)
2. Combined valuation payroll	1,714,003	1,527,579
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.23%)	(0.27%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,714,003	1,527,579
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Crook County/2044
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Crook County/2044

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Crook County/2044

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Crook County -- #2044

September 2016

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Executive Summary

Milliman has prepared this report for Crook County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Crook County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Crook County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	19.76%	14.81%	19.76%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(10.73%)	(10.73%)	(10.73%)	(10.73%)	(10.73%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.33%	11.38%	16.33%	4.59%	9.36%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.83%	11.88%	16.83%	5.02%	9.79%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Crook County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,481,440	\$2,093,043
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(1,321,819)	(1,367,392)
Allocated pooled OPSRP UAL	184,197	148,189
Side account	0	0
Net unfunded pension actuarial accrued liability	1,343,818	873,840
Combined valuation payroll	1,295,663	1,296,242
Net pension UAL as a percentage of payroll	104%	67%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(10.73%)	(10.43%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,291	\$10,303
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	230,042	49,160	21.53%	305,886	65,857
Tier 2 Police & Fire	18.95%	458,788	86,940	19.00%	431,013	81,892
Total Police & Fire		688,830	136,100		736,899	147,749
Total		\$688,830	\$136,100		\$736,899	\$147,749
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.76%			20.05%
Aggregate (Default)			19.76%			20.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,367,392)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(10.08%)
B. Actual employer payroll	664,494
C. Payment to transition liability/(surplus)	(66,981)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(10.29%)
B. Actual employer payroll	688,167
C. Payment to transition liability/(surplus)	(70,812)
4. Supplemental payment to transition liability	0
5. Interest	(92,220)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,321,819)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,321,819)	(1,367,392)
2. Combined valuation payroll	1,295,663	1,296,242
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(10.73%)	(10.43%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,295,663	1,296,242
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Crooked River Ranch Rural Fire Protection District/2647
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Crooked River Ranch Rural Fire Protection District/2647

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Crooked River Ranch Rural Fire Protection District/2647

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Crooked River Ranch Rural Fire Protection District -- #2647

September 2016

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Executive Summary

Milliman has prepared this report for Crooked River Ranch Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Crooked River Ranch Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Crooked River Ranch Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.76%)	(1.76%)	(1.76%)	(1.76%)	(1.76%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.59%	18.62%	23.75%	11.83%	16.60%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.09%	19.12%	24.25%	12.26%	17.03%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Crooked River Ranch Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$484,870	\$433,265
Allocated pre-SLGRP pooled liability/(surplus)	(41,618)	(48,019)
Transition liability/(surplus)	(42,277)	(42,596)
Allocated pooled OPSRP UAL	35,992	30,675
Side account	0	0
Net unfunded pension actuarial accrued liability	436,967	373,325
Combined valuation payroll	253,171	268,325
Net pension UAL as a percentage of payroll	173%	139%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.76%)	(1.57%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,229	\$2,133
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$42,596)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.35%)
B. Actual employer payroll	113,447
C. Payment to transition liability/(surplus)	(1,532)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.36%)
B. Actual employer payroll	127,782
C. Payment to transition liability/(surplus)	(1,737)
4. Supplemental payment to transition liability	0
5. Interest	(2,950)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$42,277)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(42,277)	(42,596)
2. Combined valuation payroll	253,171	268,325
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.76%)	(1.57%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	253,171	268,325
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Crystal Springs Water District/2571
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
Crystal Springs Water District/2571

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Crystal Springs Water District/2571

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Crystal Springs Water District -- #2571

September 2016

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Executive Summary

Milliman has prepared this report for Crystal Springs Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Crystal Springs Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Crystal Springs Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.80%)	(1.80%)	(1.80%)	(1.80%)	(1.80%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.76%	17.76%	25.44%	13.52%	18.29%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.26%	18.26%	25.94%	13.95%	18.72%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Crystal Springs Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$620,253	\$484,686
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(55,356)	(59,188)
Allocated pooled OPSRP UAL	46,041	34,316
Side account	0	0
Net unfunded pension actuarial accrued liability	610,938	459,814
Combined valuation payroll	323,860	300,171
Net pension UAL as a percentage of payroll	189%	153%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.80%)	(1.95%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,573	\$2,386
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	115,290	14,135	12.44%	110,667	13,767
Total General Service		115,290	14,135		110,667	13,767
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$115,290	\$14,135		\$110,667	\$13,767
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$59,188)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.15%)
B. Actual employer payroll	147,504
C. Payment to transition liability/(surplus)	(3,171)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.82%)
B. Actual employer payroll	160,383
C. Payment to transition liability/(surplus)	(4,523)
4. Supplemental payment to transition liability	0
5. Interest	(3,862)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$55,356)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(55,356)	(59,188)
2. Combined valuation payroll	323,860	300,171
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.80%)	(1.95%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	323,860	300,171
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

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Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Curry Library/2718

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Larrabee".

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read "Scott Preppernau".

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Curry Library -- #2718

September 2016

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Executive Summary

Milliman has prepared this report for Curry Library to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Curry Library.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Curry Library

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(17.08%)	(17.08%)	(17.08%)	(17.08%)	(17.08%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	2.48%	2.48%	10.16%	0.00%	3.01%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	2.98%	2.98%	10.66%	0.43%	3.44%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Curry Library

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$265,895	\$118,627
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(225,386)	(226,984)
Allocated pooled OPSRP UAL	19,737	8,399
Side account	0	0
Net unfunded pension actuarial accrued liability	60,246	(99,958)
Combined valuation payroll	138,835	73,467
Net pension UAL as a percentage of payroll	43%	(136%)
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(17.08%)	(30.54%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$674	\$584
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	30,059	3,685	12.44%	29,059	3,615
Total General Service		30,059	3,685		29,059	3,615
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$30,059	\$3,685		\$29,059	\$3,615
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$226,984)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(16.53%)
B. Actual employer payroll	63,568
C. Payment to transition liability/(surplus)	(8,447)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(15.68%)
B. Actual employer payroll	67,474
C. Payment to transition liability/(surplus)	(8,876)
4. Supplemental payment to transition liability	0
5. Interest	(15,725)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$225,386)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(225,386)	(226,984)
2. Combined valuation payroll	138,835	73,467
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(17.08%)	(30.54%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	138,835	73,467
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.50% compounded annually on members' regular account balances.</p> <p>7.50% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	<p>\$5.5 million added to OPSRP normal cost.</p> <p>\$33.0 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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